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Clinical Lecture.

HYDATID CYSTS OF THE BRAIN; ALTERNATE PARALYSIS (OCULO-MOTOR AND PATHETIC PARALYSIS OF THE RIGHT SIDE; HEMI-ANÆSTHESIA AND HEMIPARALYSIS OF THE LEFT SIDE); HEMIPARESIS LESS MARKED ON THE RIGHT SIDE; DOUBLE OPTIC NEURITIS.

BY PROF. DUCAMP, M. D.,
CHIEF OF THE MEDICAL CLINIC IN THE FACULTY OF MONTPELIER.

Gentlemen:—Hydatid cysts are not frequently met with in the brain. Of 363 cases of tumor of the brain recorded by Davaine only in 20 were these cysts found; and in 16 out of the 136 collected by Cobbold. Of the 40 observations made by Morgan, in 10 cases the cysts were found in the cerebral lobes, in 8 in the cerebellum, in 4 in the ventricles, in 2 in the corpus callosum and in 1 in the frontal lobes[1]. I wish now to call attention not to the rarity of the disease but to the cerebral troubles, perfectly localized and circumscribed, produced by the presence of a large hydatid tumor. I shall discuss with you the nature of these troubles.

History.—Alexandrine Devr, 17 years of age, was admitted to the St. Eloi Hospital, on the 22d of June, 1889, during the service of Castan, Sr.

Her family history showed that both father and mother, still living, are victims of rheumatism, and that a sister died at the age of 18 months, from convulsions. In regard to her individual history we learned that in childhood she suffered from cervical adenitis, and later on from a defective menstruation. The present malady began three months ago and was then only characterized by headache and constipation. A month afterwards, the patient was obliged to go to bed, owing to a moderate continuous fever, accompanied by vomiting, sharp, intestinal pain and an aggravated condition of headache and constipation. These symptoms rendered her unable to get up for a little more than a month until the young lady was taken on the 22d of June to the suburban hospital mentioned. The cephalalgia continued to increase, vomiting became much less frequent, but the constipation persisted. Fever was slight, never going above 38° C. The pulse ranged from 80 to 90.

A marked intellectual apathy was observed; paresis of the extremities came on progressively, and was especially marked on the superior extremity of the left side. The dynamometric measurement gave 19 kilogrammetres for the right and 10 kilogrammetres for the left hand. There was complete loss of sensation on the right side of the body, the same phenomenon being manifested on one half of the face.

Vision was disturbed; on both sides the visual acuteness was diminished V. O. D. G. ½. Perception of colors remained intact. On the left side a slight falling of the eyelid and external strabismus due to complete paralysis of the internal rectus muscle were observed; this latter lesion producing a crossed horizontal diplopia. The pupil was dilated but was still sensible to the action of light and to accommodation. This dilatation was increased by atropine. The right eye exhibited no external abnormal appearances.

Ophthalmoscopic examination showed more marked alterations of the left eye, an engorged disc, and tumefaction—in fact, all the characteristic signs pertaining to an optic neuritis to the typical choked disc. There were also some signs of ecchymosis.

Examination of the different organs, such as the lungs, the liver, the heart, etc., gave negative results; they were apparently healthy.

On the 6th of July the dropping of the right eyelid became considerably increased,

[1] Rabot Kyste hydatiyne du cerveau. *Progres Médical*, February 23, 1890.

ptosis being finally complete, accompanied by paralysis of the superior rectus muscle.

By the 13th, complete paralysis of all the muscles of the right eye, with the exception of the external rectus, was established, but there was no variation in the size of the pupil.

Finally, on the 15th of July the patient passed suddenly into a comatose state, the respiration became difficult, and death took place in a few hours, without there being noticed, in all the course of the disease any other alteration of the temperature or of the pulse than that mentioned. There were no convulsions, no incontinence of urine, no albuminuria, and no glycosuria.

Autopsy.—There was no inflammation of the meninges. From the moment that the brain was removed from the cranial cavity it was clearly perceived that the right hemisphere was considerably enlarged. On the external face of the right sphenoidal lobe, between the corresponding convolutions, a transparent pouch filled with fluid was found. This tumor, independent of the healthy white substance, of easy enucleation, occupied the posterior half of the sphenoidal lobe and extended to the anterior half of the occipital lobe, without affecting the cortical gray substance. The tumor was not in direct contact with the lateral ventricle nor with the internal capsule, nevertheless they exhibited signs of compression, especially marked at the internal face of the sphenoidal lobe and near the peduncle. Puncture of this sac produced in a rapid and progressive manner a diminution in the size of the right hemisphere, owing to the escape of a clear liquid resembling distilled water, the quantity of which reached 250 grammes. This liquid revealed on examination a specific gravity of 1006, but no albumen or glucose. It contained however 0.74 grammes per 100 of chloride of sodium. The sac was found to be elastic, and under the microscope exhibited no external connective tissue, but was chiefly composed of stratified fibres without any cellular elements. Over two points were noticed small opaque or whitish granular matter. The rest of the encephalic mass was healthy.

Remarks.—In the presence of this clinical case whose evolution was not entirely studied at the hospital, a diagnosis rested between a tubercular meningitis and a tumor of the brain. Although the temperature and the pulse would exclude the idea of tubercular meningitis, yet, the duration of the malady, the cephalalgia, the vomiting, the constipation, the general paralytic phenomena, and the fact that a sister of the patient had died from convulsions at the age of 18 months, all pointed to the probable existence of that inflammatory affection. The ophthalmoscopic examination alone, however, revealed to us an unmistakable sign and sustained the diagnosis of a cerebral tumor. We discovered, in fact, the presence of a choked disc, characteristic of a tumor of the brain.

True it is that tubercular meningitis produces alterations of the disc as we have had occasion to study before, but these differ so materially in their intensity, that the error of diagnosis could not have been made. Moreover, the tumor by its mere presence in the brain is alone sufficient to explain the various phenomena observed, and especially the motor disturbances which, as P. Grasset has remarked, "show from the very beginning a progressive paralysis[1]." The slight elevation of temperature can only be attributed to the state of congestion determined in the brain at the neighborhood of the tumor. Under such circumstances a correct diagnosis was extremely difficult. That of tubercular meningitis was suggested by the history of the case, by the march of the disease, and even by the signs revealed by the microscope, as the lesion might possibly have been a cerebral tumor of a tubercular nature. But if we excluded this diagnosis to what other cause could be attribed the series of phenomena presented by the case? A careful examination revealed no history of syphilis. Now, vascular tumors, glioma, sarcoma, ecchinococcus and cysticercus are antagonistic, we may so say to tubercular lesions, and out of these different hypotheses we could not formulate a correct or even reasonable diagnosis.

Finally, the anatomical signs exhibited by the ophthalmoscope added nothing to the clearing of the question and taking all into consideration, we could not but ascribe the trouble to the existence of a cerebral tumor.

The anatomical lesions however, were not sufficient, and in nervous pathology we must look for, and determine if possible, a topographical diagnosis. The predominance of paralytic disturbances on the left side, and the anæsthesia limited to the same side, indicated in a clear manner that the tumor rested largely upon the right side of the

[1] Ducamp.—Des manifestations opthalmoscopiynes de la meningite tuberculeuse. These de Montpelier, 1888.

[2] Grasset.—Traitè des maladies du systeme Nerveux.

encephalic mass. The co-existence of these motor and sensory phenomena, with alternate oculo-motor and pathetic paralysis pointed to a lesion of the cerebral peduncle. It was evident, therefore, that the tumor exercised pressure especially upon the external portion of the root of the peduncle. This alteration in the functional activity of the oculo-motor nerve, could only begin to take place in the deep portion of the peduncle at a short distance away from the anastomotic fibres of the oculo-motor of the opposite side, because the internal rectus muscle was completely paralyzed, the pupil remaining sensitive to light and retaining the power of accommodation. The dilatation of the pupil, finally, showed us that the lesion must be located at the inferior surface of the peduncle, as has been established by Blanc[1]. Again, Duval, from his anatomical researches has determined pretty well the existence of oculo-motor fibres at the superior portion of the peduncle, and therefore a pressure upon that part by the tumor could explain the progressive oculo-motor symptoms exhibited by the patient.

In regard to the paralysis of the superior oblique muscle, that was undoubtedly due to pressure exercised upon the pathetic nerve as it surrounds the external surface of the cerebral peduncle. It remains to consider whether these two cranial nerves, the origins of which are situated near each other, were not affected by a nuclear paralysis, and that the succession of paralytic symptoms could not possibly be due to lesion of the anatomical antero-posterior area, which, according to Henson and Volkers,[2] constitutes the common origin of the nerves in question. But as the internal rectus was totally paralyzed, a nuclear paralysis could not be thought of, for "in nuclear paralysis of the third pair, the movements of the third pair are abolished as regards a converging action, but are intact when the movements are to follow those of the external rectus muscle of the opposite side."[3]

It became, then, possible to establish a diagnosis of a tumor pressing upon the right side of the cerebral peduncle, upon the sensory portion and upon the motor area containing the fibres of the oculo-motor nerve, and finally upon the pathetic nerve surrounding the peduncle. This diagnosis explained the symptoms ascribed to a lesion of the right side of the encephalic mass, but it did not explain those ascribed to lesion of the left side manifested clinically in a right hemiparesis. The presence of a tumor, the character of the hemiplegia less marked than that of the opposite side, would lead us to suppose that the left side of the peduncle was also taking part in the productions of the symptoms observed, decreasing, so to speak, from right to left, and that the only portion affected was the motor area, the sensory part and the fibres of the oculo-motor nerve remaining intact.

Thus far, we are obliged to definitely admit the existence of a pressure exercised in a decreasing manner, as has been remarked, by a tumor situated on the corresponding motor area of the right side of the brain.

At the autopsy the diagnosis of these localized lesions was confirmed, but it was found that the tumor of the syheno-temporal lobe had produced its peculiar symptoms not by a direct but by an indirect pressure, and that this tumor, whose diagnosis would place it at the base of the brain, was so voluminous that it even occupied the external surface of the convolutions.

Remember that the tumor had produced sensory and motor symptoms in the extremities of both sides, and it must also be remembered that Chouppe has demonstrated that the internal capsule may be injured by cerebral tumors without producing hemianæsthesia, and that Charcot has observed a hemiplegia caused directly by a voluminous hydatid cyst.

The disassociation of the oculo-motor fibres appears perfectly clear in our case. The stage of the paralysis seems to show that the nerve fibres of the internal rectus muscle were completely paralyzed from the beginning, near the point of pressure, and more to the outside of that of the elevator muscle which was less affected. Later on, the right superior oblique muscle became paralyzed after complete paralysis of the elevator muscle, and lastly the nerve-fibres supplying other muscles lost their power. This succession of disturbances brings to our mind the divisions of Hensen and Volkers, in regard to the origin of the oculo-motor nerve. These physiologists describe, antero-posteriorly, as it were, the following centres: "the origin of the rectus internus muscle at the anterior limit of the aqueduct, above the posterior commissure; then the cellular origin of the superior rectus and of the elevator; following this, that of the inferior

[1] Le nerf moteur oculaire commun et ses paralysies. These de Paris, 1885, p. 111.

[2] Arch. d'Opht. de Græfe, XXIV.

[3] Féré. Anatomie Medicale du Systéme Nerveaux.

rectus; and lastly, still further back, that of the inferior oblique."[1]

The fibres which arise from these origins, to be distributed to the different muscles, have been examined microscopically by Kahler and Pick,[2] and these authors have divided them into two groups: an external one which contains the fibres of the elevator, the rectus superior and the inferior oblique; and a median group which contain the fibres of the rectus internus and of the rectus inferior.

Our autopsy did not seem to explain this disposition of the fibres, since the order of the paralysis was as follows: internal rectus, elevator, superior rectus, inferior rectus and inferior oblique. All clinical observations could not possibly fail to corroborate the delicate microscopical researches referred to.

In regard to the slow paralysis of the pathetic, it can only be explained by the greater resistance to pressure offered by a nerve already constituted by itself, and not dependent upon radical, disassociated fibres.

If we had left hemianæsthesia and slight hemiparesia of the right side, our case would be clinically one of left hemi-paralysis associated with crossed paralysis of the common oculo-motor, and this, anatomically, would point to a lesion of the peduncle. Benedikt[3], of Vienna, says of this lesion that it is "a syndrome characterized by a hemiparesis and a crossed paralysis of the common oculo-motor, associated with tremors of the paralyzed extremities." "In that case," as the author has remarked, "the lesion lies evidently in the cerebral peduncle on the level of the origin and exit of the oculo-motor nerve;" and further states: "The syndrome which I am studying has a great importance, since it shows a localization sufficiently clear to explain the tremors. This motor disturbance is produced in our syndrome by a lesion lying in the peduncle at the origin of the common oculo-motor nerve. In sclerosis, where the tremors resemble those of the disease under consideration, the lesion which causes it is found over the same region." Our case, which presents a change entirely peduncular, does not authorize us to recognize as yet such a localization for the tremors, although the case is different from that of Benedikt, especially in regard to disturbances of sensibility. Again, there is a little difference also, with regard to loss of sensibility, in a case reported recently by A. Manquat and Ed. Crasset,[1] in which there was hemianalgesis, the authors locating the lesion at the cerebral peduncle, a little above the origin of the oculo-motor nerve. On the other hand, in this "instance the tremors are slight and are noticed on both sides." Without wishing to contradict the statement published by the authors, we cannot but conclude that a peduncular lesion does not necessarily produce tremors.

In regard to medical treatment, whatever it may be, it could not give any good results, unless, perhaps, an external opening of the cyst could have been established. Clemenceau has seen a case of this nature, where a cure was spontaneously effected. Was surgical interference indicated? No. The tumor was not accessible, as it seemed to occupy the base of the brain, near the peduncle and without any connection with the external surface of the hemispheres. The symptoms were all peduncular and pointed to the existence of a great intracranial pressure.

Now that the malady ended in the death of the patient, we have frequently asked ourselves whether we could have agreed with Money, and allowed trephining to be performed. We mention this apropos of a communication of Webster[2] about a case of hydatid cyst of the brain, which terminated in death, in which Money expressed his opinion here referred to. We do not forget the good results that trephining has produced in several instances in the hands of Penn, Gilbert Ballet, Gelineau, Lepine, and Lucas Championiere, which have been reported to the Academy of Medicine[3], but some of those cases were of a different nature; on the other hand, when we conceive of a tumor reaching the external surface of the convolutions and apparently inbedded within them, then the gravity of the case becomes unquestionable.

In conclusion, we know that this foreign body was an acephalocyst, of considerable volume, developed in the deep portion of the white substance, without known cause, and that its development was accomplished in the course of about four months. This duration is in accordance also with the published tables of Ball and Krishaber[4] where the

[1] Blanc. Loc. cit.

[2] *Arch. fur Psych. und Nervnkr.*, x, et Prager *Zeitsck. fur Heilkunde*, 1881.

[1] *Bulletin Medical*, May 1st, 1889.

[1] Un cus de paralysie alterne de l'oculo—moteur, avec aphsie Coriginie traumatique. *Progres Medical*, February 8th, 1890.

[2] *Pathological Society of London*, Nov. 6th, 1888.

[3] February 19th, Aug. 6th and 20th, 1889.

[4] Art, Cervean (*Tumeurs*) in *Dict. Encyclop.*

greatest number of cerebral tumors is recorded, the clinical evolution of such tumors ranging from one to six months.

COMMUNICATIONS.

CLINICAL CONTRIBUTIONS TO BRAIN SURGERY.[1]

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In 1885[2] I took strong ground in favor of more active surgical interference in injuries and diseases of the cranium and brain. At that time the views advocated by me were looked upon as being too radical, and were quite vigorously opposed by many prominent surgeons of this country. Since that date there has been developed an unprecedented activity in the operative treatment of cranial and intra-cranial lesions, which, even in my opinion, has been too extreme. It is, perhaps, not difficult to understand this unscientific and unreasonable adoption of what might be called a surgical fashion. It is to be regretted that the enthusiasm created by success impells some men to interfere surgically in nearly all cases that come into their hands without a judicious study of each particular patient. That unrestrained mania for operating which has made abdominal surgery almost a by-word has, it seems to me, entered into the domain of cerebral surgery. It is just as much a part of scientific surgery to abstain from operating unnecessarily, as it is to combat vigorously the unreasonable conservatism of those who will not see the force of anatomical, surgical, and statistical evidence. Fortunately for the patients a healthy reaction is at last taking place, and surgeons are not now removing brain centres and tunnelling the brain in search of abscesses and tumors in quite as enthusiastic a manner as they were a couple of years ago. That such lesions should be promptly attacked surgically is unquestioned, but this should be done only after a thorough survey of the conditions and a judicial estimate of the gain that will possibly arise. The experimental character of many operations upon the brain in recent years has been almost as patent as in vivisectal operations done with an avowed experimental purpose. Death on the operating table and unsuccessful operations have at length begun to stay the hands of these over-enthusiastic surgeons: and there is now ground for hope that cerebral surgery will, ere long, become less reckless.

My personal opinions are very much what they were in 1885; indeed, the advances in diagnosis and the improvements in operative methods have made me even more sure of the correctness of the conclusions then advanced. I cannot, however, bring myself to approve of the reckless way in which human life is often threatened by operations which hold out scarcely a ray of hope to the helpless patient. The rapidity of healing in aseptic wounds and the tolerance of the brain under operative attack do not justify hasty resort to intra-cranial surgery simply because the patient or his family are submissive under the persuasive eloquence of the would-be operator.

I desire to-night to report a few cases which have a practical bearing on some of the fundamental principles of cerebral surgery, and I hope they will serve as a means of bringing out the views of others in this interesting field.

CASE I.—*Trephining for cortical epilepsy apparently the result of traumatism; improvement, followed by death in five weeks.*—A child, twenty-nine months old, had sixteen months previously received a fall, and on the second day after the accident was seized with convulsions. Four months before he had been struck on the head by a falling clock, but no special symptoms followed this mishap. Since the second attack he had had spasmodic seizures occurring at frequent intervals nearly every day. He dragged the left leg a little, did not seem bright, and was still unable to talk. There was a slight tendency to draw up the mouth on the left side, and also an inclination to turn the head and body to the left. When his attention was directed to bright objects he would apparently try to look at them, but his eyes usually turned to the left. His hearing seemed to be dull, but so far as could be determined the cutaneous sensibility was unimpaired. No changes were found by ophthalmoscopic examination.

Dr. Charles K. Mills, who referred the patient to me, placed the child under observation in order to detect, if possible, the

[1] Read before the Philadelphia County Medical Society, November 25th, 1891.

[2] "The Field and Limitation of the Operative Surgery of the Huma Brain," *Annals of Surgery*, July and August, 1885.

exact character of the spasms. He was watched carefully in several seizures. Usually he squealed at the beginning of the paroxysm and his face had a vacant look. The spasm began with a lifting movement of the entire body, as if with the muscles of the trunk, much like a sudden effort to rise from a recumbent to a sitting position. About the same time, as nearly as could be judged, the eyes and head turned to the left. The eyes did not keep to the left but oscillated with the jerking movements of the body; the head, however, continually turned to the left. The left leg and arm were spastic in slight flexion and were lifted up and projected outward and forward, the limbs on the right side were flaccid, but were projected forward and upward with the jerking movements apparently communicated from the trunk and the left limbs.

Another description of the attacks records that the child awakened suddenly from sleep with a toss of the body, as if badly frightened, with the head and eyes at once turning to the left. The left arm was extended forward and upward stiff and rigid, with the thumb and little finger pointing backward, the other fingers being slightly flexed. Both legs were also tossed upward in the air, the left more projected than the right. His body was lifted up and down during the attacks.

It was difficult to determine any signal symptom or serial order of movements. The spasm was both tonic and clonic, and certainly most marked in the limbs and face of the left side. The movements of the leg and arm were those of projection and protraction, and were rather movements from the shoulder and hip than from and in the distal portions of the limbs. The movements of the head, trunk, face, and limbs were often nearly coincident, but the conjugation of the head and eyes seemed certainly to be most commonly the initial movement.

The above description is taken from a former report of the case.[1]

Dr. Mills thought that the symptoms seemed to point to lesion of the area for conjugate deviation of the head and eyes, and certain associated movements of the trunk, thigh and arm. It was, therefore, determined to trephine over the posterior portions of the first and second frontal convolutions.

After encircling the head with a rubber bandage to prevent hæmorrhage from the scalp, I made an opening with an inch and a half trephine placed one and a quarter inches in front of the fissure of Rolando and a little to the right of the median line. Behind and below the opening so made I cut out another button of bone with a one and a quarter inch trephine. The spurs of bone between the two holes were cut away with forceps. One point of the aura was abnormal in thickness and rather more adherent than normal. This condition did not seem to be caused by a Pacchionian body.

A flap of the dura was raised. The pia mater was very œdematous so that it could be pitted with the finger. A thin, yellowish-white membrane was found lying loosely upon the pia-arachnoid and had probably separated from the dura when the flap of that membrane was raised. This abnormal membrane was removed. Small electrodes applied to the convolutions failed to induce conitaction of the left arm. This electrical test was repeated but failed to give results, though no antiseptic solution had come in contact with the brain tissue before the electrodes were used. Incisions in the pia allowed the serum, which caused the œdema, to escape. When the convolutions were thus clearly exposed there was no evidence of change in their structure or of any subjacent lesion. The dural flap was then sutured in position, and the portions of bone, which had been kept in antiseptic solution at a temperature of 105°, were replaced. Some catgut threads were laid beneath the buttons of bone and carried through the incision in the scalp to give drainage.

The child was under my observation for nineteen days, during which time there were only three epileptiform attacks and these were within two or three days after the operation. They were all slight and would scarcely have been recognized as pathological symptoms if the previous severe attacks had not formed part of the clinical history. A large amount of cerebro-spinal fluid escaped for several days through the opening left by the catgut drain, which was removed a day or two after the operation, and also through a small hole in the line of incision which had not healed by first intention as had the rest of the wound.

Bromide of potassium, calomel, and small amounts of alcoholic stimulants were given to the child during the after-treatment.

When he was discharged from under my immediate care his general condition was good, temperature normal, and there had been no escape of cerebro-spinal fluid for three days. The two small openings in the scalp were covered with small crusts.

[1] *Polyclinic*, April, 1889, p. 299.

Two weeks later the child died, but the history of the intervening period is unknown. I heard only indirectly of his death. No post-mortem examination was made, but indefinite information has come to my knowledge, which leads me to believe that suppuration under the scalp occurred.

This case is one of a class in which there is a great temptation to operate in hope of finding some removable lesion of the cortical centres. The findings are usually negative; and the results only temporarily satisfactory, even when the patient entirely recovers from the lesions incident to the operation. Unless the localizing symptoms and signs are more definite than in this instance, I think that in similar cases I shall hereafter be almost inclined to avoid operative interference. This provisional conclusion has been reached by a consideration of cases in the treatment of which I have been concerned, or with whose results I am familiar.

Case II.—*Traumatic epilepsy resulting from unsuspected fracture; trephining with discovery of an irregular projection of bone on the interior of the cranium.*—A man, J. H., aged thirty-four years, while working as a puddler, about eight years ago, received an injury on the left side of the head by being caught between an iron lever of a furnace door and a brick wall. He was not treated by a physician, and only lost about two days from his work, although the injured region was poulticed by him, and was the seat of a discharge for four or five months. No portion of bone came from the wound, and there were no special symptoms.

Several years ago he had venereal sores upon the penis, but no suppurating inguinal glands or syphilitic developments. Chills and fever, several years ago, constituted the only illness from which he suffered.

An examination of his head, after shaving, revealed several insignificant scars, and just above the zygoma on the left side, a half inch in front of the auricle, a depressed cicatrix sufficiently deep to hold the tip of the little finger. This was the scar left by the injury received eight or nine years ago. The cicatrix involved the temporal muscle, as was seen by the dragging of the skin over the scar during mastication. There was no evidence of depression of the skull in any other part of the cranium, and this depression did not seem to involve the underlying bone. His intelligence was good; but the patient said that he did not remember as well as he could a few years ago, and that at times his eyesight was not good. He shows at times a little mental deterioration. An ophthalmoscopic examination of the eyes gave negative results.

The patient states that about two and a half years ago he had an epileptic fit after working in a hay-field on a hot day, and that since that time he has had marked seizures about every six weeks, with lesser attacks more frequently. He has but one epileptic fit at a time, from which he rapidly recovers, and is soon able to walk about. After such attacks he feels weak for some time. For several years he has had severe headache, not confined to any one portion of the head, and just before the epileptic seizure he feels a jerking sensation on the right side of the nose. He complains that his general health has deteriorated, but there is no apparent loss of flesh.

On the 26th of September of the present year (1891), I turned up a large flap of the scalp and found, after cutting through the temporal muscle, a depression in the skull one inch in length and three-eighths of an inch in width. This fracture was a surprise to me because of the history of the case and the situation of the injury over the thick belly of the temporal muscle. A three-quarter inch aseptic trephine was applied above and behind the depression. This cut through the bone with some difficulty, because the upper portion of the disc was much thicker than the lower part. Unfortunately my segment trephine had been forgotten, or this part of the operation could have been more expeditiously performed. Thinking I had cut entirely through the skull, I endeavored to pry out the disc, but removed simply the outer table of the button; I found that between it and the internal surface there was a portion of fibrous tissue entangled. It was probably this portion of tissue entangled in the bony cicatrix as a result of the fracture at the time of the injury that enabled me to lift out so readily the upper surface of the bony disc. The entangled tissue was doubtless pericranium. Removal of the interior table of the disc revealed below and in front of the opening a teat-like elevation projecting from the lower surface of the skull and pressing upon the dura. This elevation was about one-fourth of an inch higher than the general surface of the interior table, and was the apex of an irregular elevation due to consolidation of a number of comminuted fragments of the inner table. The irregular lines of fracture, with the fragments displaced in varying de-

grees, are shown on the button removed and the rest of the bone subsequently cut out with gnawing forceps.

The specimen shows this condition very satisfactorily, though somewhat mutilated by the gnawing forceps with which the adjacent bone was removed after the original button was taken out. The depth of the skull wound and the thickness of the temporal muscle made it rather difficult to operate neatly, and my desire to get rid of the portion of bone pressing upon the dura, without prolonging the operation or increasing its severity, caused me to sacrifice the specimen in the interest of the patient. The dura was not opened, threads of catgut were use for drainage and a dry sublimate dressing was applied.

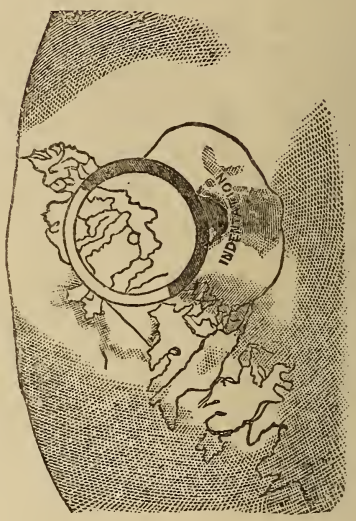
The following day the wound was found to be healing by first intention, and the drainage threads were removed. Bromide of potassium and chloral were given for two nights, and then twenty grains of bromide of potassium three times a day were ordered as a continuous treatment.

On the third day after the operation the patient had a sensation of twitching at the side of the nose similar to that which formerly preceded the epileptic seizures; but he had no fit. The wound healed by first intention, the temperature never rose above 98.6°, and on the eleventh day after the operation the patient was sent to his home in the centre of the State. He felt exceedingly well after the operation and expressed his satisfaction at the improvement of his condition. I suggested that the bromide treatment be continued by his physician, Dr. J. P. McCleery, under the idea that removal of the surgical cause of epilepsy should be looked upon as only a part of the treatment. I believe that in all such cases internal treatment should be combined with surgical procedures, and that the epileptic habit should be controlled by a prolonged course of bromides after the mechanical cause has been removed.

Seven and a half weeks after operation his physician reported that he had suffered no return of his epilepsy and was about to return to work. As far as it goes this statement is gratifying, but much more time must elapse before we can feel sure of a cure having been effected. The lesion is certainly one of those in which trephining ought to be eminently beneficial. Punctured fracture such as this should always be subjected to immediate trephining at the time of injury.

The following cuts (Figs. 1 and 2) represent the external and internal appearances of the skull in a case trephined by me some years ago. There was a small scalp wound through which I could with my finger-tip feel what I thought was rough bone. I found by incision that the roughness was due to an unusually irregular lambdoidal suture with Wormian bones; and that the only bony lesion caused by the blow received from

Fig. 1.

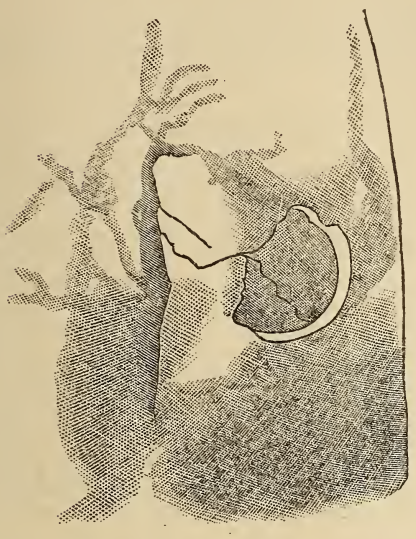


Outer surface of fractured cranium showing lambdoidal suture, point where trephine was applied, and small indentation looking like entrance of a vein made by the blow.

the pitcher, with which the patient was struck, was a small dent, looking like the opening for the entrance of a vein. The character of the vulnerating force, however, induced me to trephine. The removal of the trephine button and the insertion of a probe between the dura and the cranium discovered nothing except a small fissure on the inner surface of the disc. Death occurred within a short time from alcoholic delirium; and the autopsy revealed a T-shaped fracture of the inner table with a shelf-like detachment of quite an area of bone. If this patient had lived he would probably have had secondary epilepsy, as occurred in the case just reported. The urgent necessity of primary trephining in such punctured fractures, even when no symptoms are present, is fully illustrated by these cases. The many deaths from cerebral abscess and other inflammatory processes, following the receipt of punctured fracture

of the cranium, long ago justified the surgical conclusions that trephining in such injuries should not be delayed until the advent of symptoms of encephalic inflammation. The epilepsies resulting in cases which have

FIG. 2.



Inner surface of fractured cranium, showing cut made by trephine and large area of inner table driven inward under the small external indentation. The trephine has not cut entirely through the bone where the inner table is driven inward.

escaped the immediate dangers of encephalitis add another argument to the wisdom of immediate operation in punctured fractures.

CASE III.—*Secondary trephining for traumatic epilepsy; death from aseptic cerebral inflammation.*—In June, 1891, I operated upon a man, J. T., aged twenty-eight, with the following history:

While working in a mine he had been struck upon the head with a huge mass of coal and rendered senseless. The attending physician, Dr. James D. Harvey, found a fracture of the skull, and upon the day of the injury removed a portion of the bone. According to the patient's statement he recognized no one for fourteen days, and was, therefore, probably unconscious during that time.

After consciousness returned his left arm was paralyzed, but gradually regained power. Eight months afterward he had an epileptic seizure, and has had epileptic paroxysms at irregular intervals ever since. He is aware of the approach of a convulsion by nausea, dizziness and disorder of vision. Occasionally he has time, after the premonitory symptoms, to sit down before the fit occurs. He thinks that he ordinarily falls in the convulsion, but he does not bite his tongue at such times, though he froths at the mouth and grinds his teeth. The attacks have occurred as often as one or two in a day, but he has gone as long as four months without a paroxysm. The ophthalmoscopic examination reveals a normal fundus, clear media, and hyperopic refraction. He is unable to say in what part of the body the muscular spasm begins.

A large triangular depression is seen upon the right side of the head, the upper margin or base of which is one and three quarter inches to the right of the median line and almost parallel to it. The apex of the triangle points downward and forward toward the ear. The anterior margin of the depression is near or a little behind the fissure of Rolando, and the centre of the depression is over the superior parietal convolution, or in that vicinity. The deepest portion of the depression is that near the middle line of the skull, at which part its depth is fully a half inch · the edge of the depression at this point is almost vertical. The interior and posterior borders are less abrupt. The angle, which I have called the apex of the depressed triangle, is about two inches above the ear, and a little behind a vertical line drawn upward from the ear. The margins of the depressed area form an equilateral triangle, each side of which is about one and one-quarter inches in length. There are a number of other scars on the head, one or two of which radiate from this depression. There is distinct weakness of the grasp of the left hand, but no marked difference in size of the hand or the arm. The patient complains of the left hand feeling differently from the right. There is no muscular contracture and no apparent change in the electrical reaction or in mensuration.

On account of the epileptic attacks in this case I determined to operate and remove any apparent cause of irritation. If nothing abnormal was found, I intended to remove the cicatrical tissue in the bony gap and also the bony margin of the opening in the skull. Accordingly I made an elliptical flap in the scalp which disclosed a triangular depression in the skull corresponding with the indentation seen externally. This was filled in with fibrous tissue, which I dissected out of the bottom of the depression. The bone was so thick that the gnawing forceps

could not cut away the edges, hence, I used an aseptic trephine and removed a disc one inch in diameter from one corner. Subsequently I made four small holes along the edge of the depression with a half-inch trephine and then was able to gnaw away the edges with gnawing forceps. The soft tissues were yellow, and pigmented in places with particles of carbon, evidently due to coal dust ground into the wound at the time of the accident.

Before the operation pressure upon the scalp gave the sensation of a small cavity filled with air under the integument. It resembled the sensation experienced when a varicose vein is palpated. Removal of the skin over the gap in the cranium did not alter this tactile phenomenon. The yellow pigmented tissue, found as above mentioned, was not brain tissue; and when cut through disclosed what looked like the interior of an emptied cyst, because the inner surface of the tissue had a smooth, glistening surface. No fluid escaped or had escaped by puncture. After having dissected away a considerable portion of this material, and having removed the edges of bone along the entire circumference of the bony opening I reached normal brain-tissue. Hæmorrhage from the cerebral wound and from the periosteum was profuse. It seemed impossible to stop that which came from the brain and its membranes, which were fused together in an almost indistinguishable mass at the bottom of the deep hole. The triangular opening in the skull measured about two inches along each margin. The pulse became very feeble, counting 165 a minute. Prolongation of etherization and operation seemed unwise.

After unsuccessful attempts to stop the bleeding by ordinary methods, I concluded to grasp all the bleeding points with hæmostatic forceps which should be left in the wound. This was done, and five forceps left in the wound with their handles protruding. Iodoform powder was dusted upon the surface of the exposed brain and strips of iodoform gauze packed into the cavity. A few sutures were applied after the flap had been replaced; the gauze strips and hemostatic forceps projected from one corner of the wound. A voluminous dressing of iodoform gauze and cotton was then applied and the patient put to bed. Seven and one-half hours after the operation the dressings were saturated with bloody serum, and, therefore, in order to avoid sepsis, I determined to reapply them and to remove the hemostatic forceps at the same time. This was done carefully, the gauze withdrawn, and the wound redressed with a dry antiseptic dressing. In drawing out the strips of gauze a little oozing of blood occurred, but this hæmorrhage I did not think of sufficient importance to prevent my closing the whole wound with sutures and without drainage.

The next morning the patient showed great restlessness, but was in a condition of hebetude. He, however, made his wishes known when he desired to urinate. Bromide and chloral were given to control the restlessness.

On the second day respiration varied from 25 to 40 in a minute, and the temperature was 101°. During the day the patient's condition was fairly good, though he was difficult to control on account of his restlessness and irritation. The urine was passed unconsciously. A turpentine enema was given; bromide and chloral were continued. On the third day after the operation it was necessary to give the patient one-sixth of a grain of morphine hypodermatically, and to strap him in bed because of his tossing from side to side. During the day he became hoarse, and I discovered at the base of the right lung harsh râles, probably bronchitic. The temperature was now 101.6°, while his respiration was between 35 and 40.

On the fourth day after the operation the note is made that he slept after a hypodermic of morphine, one-sixth of a grain, and is quieter. Respiration 40 to 45. His breathing, however, was embarrassed and harsh, somewhat of the Cheyne-Stoke's type. At 7 P.M. respiration was 50; temperature 102°. The wound had been left undisturbed since the evening of the operation when the hemostatic forceps were removed. The rise in temperature and the patient's restlessness made me fear that there had been something amiss in my antiseptic precautions. I, therefore, determined to inspect the wound. Upon removing the dressing, I found the flap bulging and detected a feeling of fluctuation when my finger was put upon it. I expected to find pus under the flap, although the wound had healed by first intention. I tore open the union, but no evidence of pus existed; a soft aseptic clot of blood, however, lay under the flap. I removed the clot and explored the cranial cavity through the operation wound with my finger in search for pus. The cerebral tissue was disintegrated and soft, but no purulent collection was found. I moved my finger in various directions in the pultaceous mass, and finally, when my little finger was buried its entire length, came upon a hard mass at the

bottom. This, I presume, was one of the great ganglia. The tissue overlying this part was almost fluid. There was no odor of decomposition nor evidence of pus. At the time of this exploration the patient was moribund, and I felt fully justified in these radical measures. Unless I found pus he was sure to die.

The dressings were reapplied; hypodermatic injections of strychinne were given. Respiration gradually failed and the patient died the next morning, which was the fifth day after the operation.

It seems hardly possible that the fatal symptoms were due to pressure from such a small amount of hæmorrhage under the flap, since there was much space by reason of so much bone having been cut away; and, morever, the blood, if causing tension, would probably have readily escaped before the wound had united. I concluded, therefore, that death occurred from aseptic cerebral inflammation leading to disintegration and softening of the brain tissue. The pulmonary symptoms may have been secondary; or he may have had a congestion, preliminary to an acute pneumonia, acting as a prominent feature in the fatal result. Rapid respiration was certainly an early symptom.

The case is to me exceedingly instructive, because the indications for operation were clear, and because death occurred notwithstanding what seemed to be perfect aseptic conditions of the wound, during its entire course. It is a good illustration of the fact that modern surgery has not rendered serious operations entirely devoid of dangers. The diminution of the death-rate in operations has been great in recent years, but certainty of recovery is by no means as absolute as some reporters of operations would have us believe.

The next case is reported because of the youth of the patient.

Case IV.—*Trephining for depressed fracture of the skull in an infant seven months of age; recovery.*—A mother, while carrying her seven months' old child along a railroad track, fainted or had epileptic seizure, and fell, dropping the child. When she regained consciousness the baby was whining and fretting a little, but did not seem badly hurt. After the mother reached home and removed the child's wraps she discovered a large indentation of the skull on the right side of the head, which she supposed was due to the child's head having struck against a railroad tie, or upon the iron track. The baby did not have any symptoms of brain implication.

When seen by me on the next morning the infant was perfectly comfortable, had slept well all night, played as usual, and had a good appetite. The mother believed the depression to be less marked than when the accident occurred. Examination revealed an irregular depression in the parietal and occipital region on the left side of the head. The lower extremity of the vertical diameter of this depression was about two centimetres above and five centimetres back of the top of the ear. The depression extended upward six centimetres. The horizontal diameter—that is, that parallel to the sagittal suture—began at a point near the anterior portion of the posterior half of the parietal bone, and extended backward six centimetres, very nearly bisecting the vertical diameter. The depression at its deepest portion was fully a centimetre below the surface of the skull.

At this time the patient's temperature was normal; pulse 120. During the night two grains of sodium bromide were given because of slight restlessness. The bowels were opened by a soap suppository.

On the second day after the accident I found the child feeling well and the depression less marked than on the previous day, when I made the first examination. I felt unwilling, however, to let the injury go without surgical treatment and therefore determined to make at least an exploratory incision, because the injury had been so severe as to make a very deep depression. The possibility of secondary symptoms, such as epilepsy or impaired intellect, seem to me to indicate this slight operative interference.

An Esmarch's bandage was carried around the head before the incision was made to prevent bleeding. A horseshoe flap was then dissected up at the point of injury. The bone was markedly depressed, showing a condition similar to green-stick fracture. I thought I could cut through the cranium with a strong knife but found it necessary to use a trephine. A small trephine opening was made through very thin bone at the anterior edge of the depression and the portion pushed down upon the brain easily elevated with the end of a grooved director. A few bleeding arteries were twisted, and the edge of the scalp wound drawn together by catgut sutures. Boric acid powder and dry sublimate dressing was applied.

The patient reacted from ether promptly and went quickly to sleep. Two grain doses of sodium bromide were given at intervals until ten grains had been taken. The patient was restless through the night, but a few

drops of paregoric quieted. The bowels were kept open by injections of oil.

The temperature the day after the operation reached 101.8°, but soon all symptoms of fever disappeared, and on the seventh day the dressings were removed. The wound was found to have healed by first intention without suppuration.

At the end of the sixteenth day the patient was sent to his home in New Jersey entirely recovered.

In this case the accentuated character of the depression was the factor which led me to adopt operative procedures, although I know the tendency for depression of the skull in healthy infants to correct itself spontaneously.

About eighteen months ago I saw a child who had received during birth a very marked indentation of the skull because the head had become locked on the promontory of the sacrum during delivery. The depression was situated on the left side of the head, and included portions of the frontal and parietal bones near the anterior fontanelle. It was about two and a half inches long and quite deep. The case was one of difficult labor requiring forceps at the hands of Dr. Anna M. Fullerton, and the child, when born, was in the first degree of asphyxia, requiring the warm bath and artificial respiration. The child had frequent convulsions, beginning twenty-four hours after birth, evidently due to implication of the brain; yet I declined to operate because I thought that the indentation was probably not associated with actual fracture of the soft bone. The convulsions ceased within twenty-four hours, and although the patient was under observation for several weeks, I never could convince myself that operative procedures were justifiable. The depression gradually lessened and when the child was last examined by me seemed unimportant. The medicinal treatment of the child consisted of sodium bromide and potassium iodide. I have sometimes felt in regard to this case that the subsequent history might perhaps show that it would have been better to have interfered. I have not been able thus far to succeed in tracing the subsequent history of the little patient.

Case V.—*Specimen of cerebral tumor which could have been readily removed by surgical means.*—The brain herewith presented shows a tumor occupying the parietal region and was obtained from a subject in the dissecting-room of the Woman's Medical College of Pennsylvania. The history of the case, is therefore, exceedingly indefinite, though through the courtesy of Dr. George S. Robinson I have been able to obtain the following notes:

The patient was a woman, aged 35 years, of intemperate habits, who had, so far as known, no injury of the head and was not discovered to be syphilitic. She was an inmate of a public institution and was sent to its infirmary about a week before her death, complaining of pain in the head which seemed to be somewhat relieved by pills of an anti-neuralgic character. The headaches continued, however, notwithstanding medication, and for about two days vomiting occurred. The patient then became comatose and paralysis of the right arm and leg supervened. The pupils were somewhat dilated and did not respond to light. Respiration was slow and the face flushed. No convulsions occurred, but there were slight twitching of the facial muscles. The patient was not noticed to be blind or deaf. Death took place on the sixth day after admission to the infirmary.

An examination of the specimen (Figs. 3 and 4) shows a flat, circular tumor in the right parietal region lying between the dura mater and the cerebral hemisphere. The convolutions are pushed downward but are not infiltrated in the least degree. The dura has not been preserved, but it is quite evident that the growth was attached to the inner surface of the dura, since its upper surface is torn and it has no attachments to the convolutions, but can be lifted out of its bed without disturbing their integrity. The tumor is almost circular when inspected from above, being 6 centimeters in the antero-posterior diameter, and 6.5 centimetres in the transverse diameter. It is flat from above downward, varying from 2 to 3 centimetres in thickness. It occupies the right parietal region upon the superior aspect of the cerebrum. Its anterior margin lies in a line with the calloso-marginal fissure, and pushes forward the ascending parietal, or posterior central, convolution. The tumor extends backward to the parieto-occipital fissure crowding downward and backward the first occipital convolution. It extends outward and downward to the posterior end of the parallel fissure, or the first temporo-sphenoidal fissure, pressing upon the angular gyrus. The first and second parietal convolutions are flattened and lie underneath the tumor in the concavity made by its growth and producing pressure downward. On the inner aspect of the hemisphere the tumor presses the convolution downward, being nearly 2 centimetres thick where it lay in contact with the falx. The anterior

edge of the tumor is about 1 centimetre further forward than the posterior edge of the corpus callosum. The gyrus fornicatus and the precuneus are pressed downward, but the cuneus does not appear to be pressed upon or displaced.

FIG. 3.

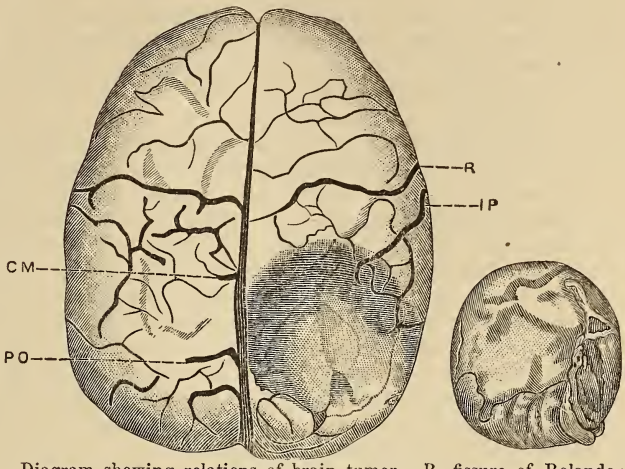


Diagram showing relations of brain tumor. R, fissure of Rolando; I P, inter-parietal fissure; P O, parieto-occipital fissure; C M, calloso-marginal fissure. The tumor has been lifted out of its bed.

moval. Its location immediately under the dura, its freedom from attachment to the cerebral convolutions and its moderate size would have made its removal easy. Its location behind the motor area is probably the reason that the patient's symptoms were not marked until just before the fatal termination of the disease. Her habits of life and surroundings were such that she would

FIG. 4.

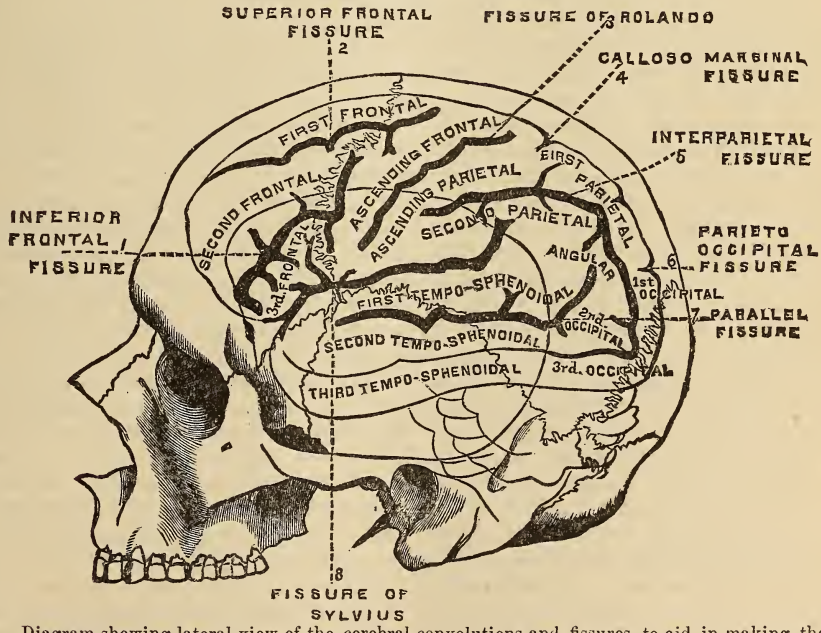


Diagram showing lateral view of the cerebral convolutions and fissures, to aid in making the description clear.

No surgeon can look upon this specimen without a feeling of regret that he could not have had an opportunity to attempt its re-

not be likely to call a physician's close attention to the early manifestations of cerebral disorder, if indeed these were apparent to the patient herself. A large opening made with trephine, gouge, or saw, followed by a similar incision of the dura would have enabled the operator to lift the tumor from its bed without hæmorrhage or disturbance of the cerebral convolutions. The growth is probably a fibroma.

The occurrence of right-sided paralysis seems rather curious, but Dr. Robinson states that he is sure of the correctness of this note, for he remembers that she used her left hand during her final illness. There is no evidence of a second tumor on the left side. Possibly the growth may have so pressed against the falx as to have impeded the current in the superior longitudinal sinus, and thus have given rise to pressure on the left cortical centres near the upper end of the fissure of Rolando. Unfortunately, I did not see the specimen until after the dura and falx had been removed.

Case VI.—*Probable basal cerebral tumor, in which operation was deemed inadvisable.* —In September, 1889, a man, aged thirty-four, was referred to me by Dr. H. C. Bloom, who had reached the conclusion that his patient was probably suffering with brain tumor. The history was somewhat difficult to obtain from the patient, who had evidently some impairment of mental faculties. In childhood he had had otorrhœa in each side, and thought that his present ailments, of two or three years' duration, had succeeded a renewed discharge from the left ear. About a year before I saw him he had fallen insensible; but for a year and a half previously he had had attacks of severe pains in the head, to the left of the median line. Some failure of vision had been observed for eighteen months; occasionally he walks unsteadily, but there is no apparent loss of power in arms or legs. His family thought his mental traits had shown change for several years. He is now becoming fat, sleeps a good deal, and is somewhat "weakminded" in his conversation and facial expression. There was no direct history of syphilis. Optic atrophy was found in both eyes; being more marked in the left, with which he could only see enough to count figures. The vision of the left eye was $\frac{4}{LX}$. Examination showed him to have lateral hymonymous hemianopsia and Wernicke's pupillary reaction. The fields of vision indicated a left-sided lesion. No deviation of the eyes was determined, but he thinks he has at times had double vision. Both tympanic membranes were perforated. He had had no epileptic seizures, but, as above stated, had once fallen unconscious. The urine had a specific gravity of 1010 and contained neither albumin nor sugar. The grasp of the right hand was stronger than the left, accountable perhaps to his profession—that of a dentist. Thermometric examination for several days showed him to be free from fever.

No anæsthesia nor paresis could be determined. Dr. B. Alexander Randall's examination resulted in finding in the left ear an old cicatricial condition, with a mere trace of discharge. The original trouble had probably been present in childhood, and was now in abeyance; though occasional exacerbations had in all probability occurred. The right ear was in a state of chronic suppuration of the attic and adjacent cavities, with some likelihood of the existence of diseased bone. No involvement of receptive or central auditory apparatus was discovered by the use of tuning forks. The patient's symptoms were thoroughly studied for me by Drs. Charles K. Mills, H. C. Wood, Edward Jackson, B. A. Randall, A. W. MacCoy.

From Dr. William Osler, who had seen the man some months before, I learned that then he had had an intense optic neuritis, but at that time no hemianopsia. Dr. Osler suspected a slowly growing neoplasm; probably located in an anterior location, because of the early alteration in habits.

Dr. Mills was inclined to think that the symptoms shown when the patient came under my care pointed to a lesion between the optic chiasm and the primary optic centres. This he considered might be a tumor or abscess of the inner part of the temporal lobe, encroaching on the optic tract back of the chiasm or a similar lesion of the cerebellum advancing and invading the more anterior structures.

Dr. Wood believed the localizing symptoms pointed to a lesion encroaching upon the corpora quadrigemina or optic chiasm, which was most probably either a localized meningeal inflammation with much exudation, due to diseased bone at the base of the skull, or a tumor there situated. He thought it possible that an abscess might exist in the temporal or frontal lobe, but there was little evidence to indicate this being a probability.

This case was one that offered a good many points of surgical interest; but after determining that the lesion was probably basal and on the left side, I declined to operate, because there was no evidence of

the left ear being a probable cause of intracranial suppuration. If the symptoms had pointed to a right-sided lesion, the condition of the right ear would have influenced me strongly toward operative measures, looking to the evacuation of a temporal abscess. The association of chronic aural suppuration with cerebral abscess is so well known that I think I should have strongly inclined to exploratory trephining.

I accordingly declined to operate, and sent the patient home. I heard from him frequently, but he gradually lost vision and mental power. I had arranged for, and obtained permission for an autopsy; but when he died the past summer no word was sent me. Previously to death he had violent pain in the head, a prolonged chill, several successive convulsions and coma with high temperature. These symptoms occurred suddenly and terminated fatally in four days. Before that time he thought his eyesight, which had been almost totally lost, was improving. The time he survived after my examination, nearly two years, leads me to believe that our abstinence from operation was correct; since the lesion was more probably a tumor than an abscess. If a tumor, its removal was certainly impossible.

This case presents a picture different from the specimen before you, in which the tumor could have been lifted out so readily. I show a diagram of the cerebral convolutions which may aid in following the description of these two cases of cerebral tumor.

I fully recognize that the record of these few cases has not been one of brilliant results. The death of some of the patients, and the short time between operation and this report in others, make the communication in some respects unsatisfactory. It has seemed to me, however, that there are elements of interest in the histories which will afford food for thought and open the way to discussion. It is for these reasons that I have been tempted to give these clinical histories which are certainly not in any way remarkable.—For discussion, see Society Reports.

DETAILS ABOUT COLORADO SPRINGS IN THE CLIMATIC TREATMENT OF PHTHISIS.

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In spite of the numerous so-called "cures" for phthisis which have been recommended during the last few years, the only established fact of value which stands fast is that there are certain localities where the disease rarely or never occurs, and that very many patients, sent from elsewhere to some of these places, may recover entirely from it. In the light of this fact the choice of situations for our consumptive patients is a matter of the utmost importance, as upon it may depend the issue of the case.

In a former paper[1] I endeavored to lay stress upon the existence of a *climatic idiosyncrasy*, or, as it has also been called[2], "individual adaptability"; viz., that often for no apparent reason a climate which suits one individual may in no way suit another. Although we may sometimes base upon the general characteristics of a patient an opinion as to what sort of climate will probably prove most suitable, we are oftener but little able to determine this in advance, and are obliged to make our decision in accordance with the results which have been obtained by general experience in the largest number of years.

Nearly all statistics go to show that the results in the climatic treatment of phthisis are much better at high altitudes than at low. The truth of this is evident in the following tables, constructed from the carefully compiled statistics of Dr. S. E. Solly[3], which are based upon all the published statistical results obtainable and suitable for the purpose of analysis. (In Tables I, II, and III.)

It is to be noted in these tables that the "benefited" includes both patients who have improved and those actually cured.

Comparing now the condensed results in a third table, we have an excellent illustration drawn from the comparison of a large number of cases, of the therapeutic value of high altitudes in phthisis as compared with low.

With the knowledge of these statistics we may be in a position to recommend a high altitude to our patients, but beyond this it is sometimes very difficult to pass. We must be guided here largely by such features as convenience, comfort of living, pleasurable society and occupation, and the like, which are by no means unimportant factors in determining the amount of benefit to be obtained.

In reading somewhat extensively the literature of the climatic treatment of phthisis,

[1] Climatic Treatment of Phthisis. Medical and Surgical Reporter, Feb. 14, 1891.

[2] Denison. The Preferable Climate for Consumption. Transac. Ninth Intern. Med. Congr. Vol. V.

[3] Advanced sheets furnished by Dr. Solly from his articles in Hare's System of Therapeutics.

TABLE 1.

Low Climates. [Less than 2500 feet.]

Open Resorts.	No. of Cases.	Where Treated.	ALL STAGES. Cured.	ALL STAGES. Benefited.	FIRST STAGE. P. C. of all Cases.	FIRST STAGE. Cured.	FIRST STAGE. Benefited.
1. Dr. C. J. B. Williams.	1000.	Low Climates.	4%	39%	67½	5%	45%
2. Dr. Austin Flint.	670.	Low Climates.	7%	—	—	—	—
3. Bromptom Hospital.	20.	Madeira. One winter.	—	45%	—	—	—
4. Dr. Herman Weber.	24.	Egypt. One to four winters.	—	50%	41½	—	67%
5. Dr. W. H. Geddings.	69.	Aiken, S. C. during winters.	19%	61%	—	—	—
6. Dr. H. A. Johnson. Sanitaria.	6.	California during winters.	50%	67%	66½	50%	75%
7. Dr. H. Brehmer.	700.	Görbersdorf during 1877.	13%	—	—	53%	—
8. Dr. P. Dettweiler.	1022.	Falkenstein up to 1887.	13%	24½%	—	—	—
9. Dr. E. L. Trudeau.	146.	Saranac up to 1888.	11%	54%	—	—	—
10. Dr. Karl Von Ruck.	515.	Asheville up to 1890.	11½%	—	15	24%	45%

TABLE 2.

Elevated Climates. [4500 feet and upwards.]

	No. of Cases.	Where Treated.	ALL STAGES. Cured.	ALL STAGES. Benefited.	FIRST STAGE. P. C. of all Cases.	FIRST STAGE. Cured.	FIRST STAGE. Benefited.
1. Dr. Herman Weber.	106.	Alps.	36 %	75 %	66%	51½%	64 %
2. Dr. Theod. Williams.	141.	Alps.	41 %	75 %	65%	63 %	90 %
3. Dr. H. A. Johnson,	19.	Colorado.	37 %	79 %	47%	44½%	78 %
4. Dr. Charles Denison.	202.	Colorado.	37 %	80 %	37%	75 %	92 %
5. Dr. S. A. Fisk.	100.	Colorado.	35 %	67 %	42%	66 %	90½%
6. Dr. S. E. Solly.	141.	Colorado.	33½%	67½%	44%	58 %	87 %

TABLE 3.

	ALL STAGES. No of Cases.	Cured.	Benefited.	FIRST STAGE. No. of Cases.	Cured.	Benefited.
Low Climates.	4167.	10 %	36%	714.	20%	44 %
High Climates.	709.	36½%	74%	350.	62%	84½%

I have been impressed by the absence of exact information concerning these details of the various health resorts, at least in many of the books and articles consulted.

Having but recently returned from spending several months in Colorado Springs, and having endeavored by observation and interrogation to learn some of the facts regarding it, I am led to offer the following informal remarks in the hope that they may prove of some use to colleagues about to send patients to the west.

From the point of view of *climate* alone there is probably little to choose between various parts of Colorado and the surrounding country. It is much alike in all, and, except that the soil of some places is more clayey, and therefore not to be preferred, one locality can hardly be selected above another. As regards, however, actual comfort in living, Colorado Springs presents certain decided points of advantage. It was founded about twenty years ago as a health resort, and has remained typically such. It is situated on a table-land 6000 feet above the sea and about six miles to the east of the foot of Pike's Peak. It is seventy-five miles south of Denver and forty miles north of Pueblo, on the main line of the Denver and Rio Grande railroad. The outlying range of the Rocky Mountains, of which Pike's and certain other peaks are members, is in full view, while in the other direction, to the east, is an uninterrupted view of the plains—a peculiar and beautiful combination rarely seen.

The houses are for the most part far apart, and each, even the small ones, surrounded by its own plot of ground. There are several handsome business blocks, but the town does not do much business in proportion to its population. Large numbers of trees, chiefly the rapidly growing and leafy cotton-wood, are planted along the streets, making them very shady in summer. Indeed, seen from the top of Pike's Peak, Colorado Springs looks like a small patch of forest.

The trees, however, are no indication of dampness, for, planted as they are in a soil which is almost purely gravel, they would promptly die were it not for persistent and watchful irrigation. The same is true of the really beautiful summer grass. Nothing but the greatest care coaxes the verdure out of plains which would otherwise be arid.

Colorado Springs is provided with a system of rapidly moving trolley cars, which not only carry passengers to different parts of the city, but extend as well to Manitou and other situations in the surrounding country.

There are numerous good drives, leading both towards the mountains and the plains. The celebrated Garden of the Gods is a drive of but four miles from the town.

The gravelly soil, already alluded to, is so dry that one cannot but be struck by the curious disappearance of the snows in winter. Walking about one can kick this up and find only dust underneath. In fact the snow seems not to melt but to evaporate. Only when exceptionally heavy does it produce mud, and this lasts only for a short time—a day or less.

The evaporation of the snow and the rapid disappearance of any mud is of course in great measure due to the extreme dryness of the air. Persons newly come to Colorado often complain of this, as it causes chapping of the lips, uncomfortable dryness in the nose and the like. I have in fact, noticed some invalids drawing in with pleasure the air of an occasional damp day. To the majority, however, the dry air is peculiarly pleasant and invigorating. Meteorological observations[1] showed a relative humidity for the vicinity of Colorado Springs for four years of only 45.8, as compared with 65.8 for Los Angelos, 69 for Jacksonville and 70.2 for New York.

Sunshine in Colorado Springs is abundant. The number of clear days estimated for five years gave an average of 194, with 128 fair and 43 cloudy days. The average yearly number of cloudy days in New York, estimated for the same time equalled 109. The amount of rain-fall is, as a rule, very small. The average yearly fall estimated for ten years was 15.87 inches, as compared with 42.7 inches in New York.

As in all places of high altitude the direct rays of the sun are powerful. In summer the days are often hot, but rarely so oppressive as in regions where the air is moist. In winter, on the other hand, the warm sun's rays enable patients to sit in the open air a large portion of each day.

Other characteristics of high altitude seen in Colorado Springs are the sudden and violent winds and the rapid alterations of temperature. These are, of course, distinct disadvantages, so far as *comfort* is concerned. Unfortunately an equable climate, with gentle zephyrs and the like, is only to be found at low altitudes, and usually in the warm moist regions so unsuitable for consumptives.

[1] S. E. Solly. Invalid's Day in Colorado Springs. Transac. Amer. Climat. Assoc. 1887.

With the wind and the gravelly soil one encounters at times dust storms which are extremely disagreeable. As to their hygienic effect I cannot do bettter than quote the words of a phthisical but convalescent lady whom I had the pleasure of meeting. "It seems strange," said she, "that it should be beneficial to swallow dust by the tablespoonful, but it appears to do no harm."

I should however give an erroneous impression did I imply that violent winds and dust storms were an every day occurrence.

The prevailing wind during the night and early morning is north or northwest, which commonly shifts in the afternoon to south or south-east.

Any further details regarding the weather of Colorado Springs can perhaps best be treated under a brief review of the different seasons. During the summer months, especially rare in July and August, thunder showers of short duration are exceedingly liable to occur in the afternoon; the bulk of the annual rain-fall taking place at this season. The mornings, however, are almost always clear. The nights are never damp and foggy as in late summer in the east, and I have never been able to perceive dew. The heat of the summer sun is evidenced by the thermometer rather than by the sensations, owing to the rapidity of evaporation of perspiration. At times, however, the days are as warm as in the east, but the nights are nearly always cool, and blankets are usually required on the beds.

Probably the most charming season of the year is autumn. For weeks at a time it may be that scarcely a cloud will be seen and but little rainfall. Patients can spend the entire day in the open air, and even the evenings are not injurious. The same is true of winter. Frequently the temperature in the night at this season is quite low; and now in the daytime, one realizes the difference between the sunny and the shady side of the street. The power of the sun under these circumstances can only be appreciated by those who have experienced it. The very low temperature of the northwest is uncommon, and the cold is not penetrating as is the damp cold of the east.

Spring is the least pleasant time of the year. It must be remembered, however, that seasons occasionally occur in which the amount of rain-fall and of dampness is in decided excess of the average.

In March and April there is apt to be a good deal of cloudiness with frequent snow, though, as stated already, the snow rarely produces mud. In comparison with an eastern early spring the weather is very pleasant. Occasionally during the winter and spring there prevails a peculiar hot west wind, probably coming over the mountains from the Pacific, and called the "chinook."

Turning again to some further details concerning the town and the method of life of those seeking it:—

In Colorado Springs are situated a general hospital under the charge of the Sisters of St. Francis, the State Asylum for the Deaf, Dumb and Blind, the new Printers' Home in course of construction; the Colorado College for the young of both sexes, a club and fine club-house and two sanitaria, the Bellevue and the Glockner. Both of these latter are benevolent and most deserving institutions, intended primarily for those whose means are limited. Both have been recently erected.

I have personally inspected the Bellevue. It is pleasantly situated on elevated ground, is tastefully built and furnished, and cannot but be a comfortable and cheerful home for its inmates. It is in no sense like a hospital in its internal arrangements. The patients are located in separate rooms. Those well enough to do so meet in a common parlor and dining-room. Trained nurses are in attendance, and the physicians to the institution are among the most prominent of Colorado Springs. The rates of board are $8.00 a week and upwards according to room, but even when the institution is full this hardly pays expenses. Nevertheless, cases unable to pay anything are admitted free at the discretion of the managers and physicians.

The Glockner sanitarium is conducted on the same general plan. The rates of board are $7.00 a week and upwards. A limited number of free patients are admitted. Externally it is a comfortable-looking, roomy brick building.

Colorado Springs possesses a most pleasant social life. A comparatively large proportion of the population consists of people of means and cultivation, there in the pursuit of health and engaged in no engrossing business. The society is cosmopolitan. The wants of the inhabitants are well supplied by shops of very good grade, which are confined chiefly to a portion of a single street. The markets are good. On account of the somewhat shifting population numerous houses furnished and unfurnished and of all sizes are always to be rented. The rates of rent, and indeed all expenses of living are higher than in most parts of the east. Furnished houses of six to eight rooms bring

from $35 to $60 per month, and larger ones in proportion. Unfurnished houses are of course less expensive, and it is the custom of the furniture dealers to sell their goods with the agreement that they will receive them again at about half price when the customers break up housekeeping.

My own observation leads me to believe that where whole families come to Colorado Springs for a protracted stay it is often both more comfortable and more beneficial to keep house even though in a very small way. In some parts of the town pleasant apartments of two or three rooms may be rented for housekeeping by those whose means do not warrant taking a whole house. Wages of domestics are high—from $20 to $30 a month.

The hotels or boarding houses may be patronized by those not desiring to keep house. Of the former there are several, the largest possessing 200 rooms. Rates at the hotels are from $5 a day down, with some reduction for a continuous stay. For a winter residence at a hotel it is extremely desirable to obtain a room heated by an open grate or a stove rather than by steam, as the latter is less easily controlled and provides less perfect ventilation. In fact the steam heating often makes the hotels unbearably hot in winter. Boarding houses are numerous. At the best known, table board costs $8 to $9 weekly, and a room averages $20 a month; making a total of about $12 a week. In less fashionable parts of the town good board including room may be had for $8 to $9 a week or even perhaps for less.

For those whose health permits of it, probably the most convenient plan is to choose a room to suit and to go out to a hotel or boarding house for meals. For women and for very delicate men this is frequently not feasible.

Driving and riding are the principal occupations of invalids whose strength and means permit. Horses are cheap. Well broken bronchos can be bought for from $40 to $60 and ordinary horses for a slightly higher rate. Stabling costs from $17 to $20 a month, and it is probable that even still better rates could be obtained. Livery stables are numerous and safe horses can easily be hired. The use of a horse and carriage for a half day costs only $2, and a horse and saddle $1.50 for the same time. The rates are less if taken by the month.

Comparatively few sufferers from pulmonary diseases are unpleasantly affected by the high altitude even on first arriving. But it is well to avoid much exercise at the beginning. It is a mistake to suppose that the more one exercises the better. At first simply to be out of doors, even though confined to a chair, is all that is to be recommended. The invalid should endeavor to spend several hours of each good day in the open air. Later, as strength increases and as one becomes acclimated, short walks and drives are desirable. For those in whose cases no contra-indication exists, horseback riding will be found exhilirating and healthful. It increases the vital capacity most decidedly. It is often supposed that especial virtue attaches itself to sleeping in the open air in summer. I cannot but feel that such a course is to be adopted with great caution. For those unusually robust it may be excellent, but for many it is unsuitable and merely exposes them to the risk of taking cold without offering any real advantage in lieu thereof.

I wish, too, to emphasize the great importance of wearing suitable clothing. Recent arrivals are very commonly attacked by coryza and bronchitis; attributed often to the dust, but due really to the lack of a proper appreciation of the need of watchfulness against temperature changes. In winter great coats and wraps must always be ready at hand. Woolen underwear should be worn, though this need not be thicker than is required in the east. For delicate persons with poor circulation, who tend to feel chilly at night, woolen night-wear will be found a great comfort and safe-guard, as the bed-rooms grow cold before morning. In summer women may wear wash dresses and thin underwear in the middle of the day, but should change to silk or woolen dresses for the evening; and men should not hesitate to assume light overcoats on the first evidence of chill in the air. No one should take a horseback ride of any length on summer afternoons without carrying a good rubber coat along.

It might seem hardly necessary to add that imprudences of all kinds should be carefully avoided, and yet it appears to be a common idea with many patients that coming to Colorado Springs is all that is needed to effect a cure; and invalids are often most negligent in this matter. As one writer on Colorado has pithily put it.[1] "There is no country where the invalid fool is more surely and quickly punished for his neglect of good advice." On this account

[1] S. E. Solly. Invalids suited for Treatment in Colorado Springs. Transac. Amer. Climat. Assoc. 1888.

it would be best for careless patients to be sent to one of the sanitaria referred to, as results in closed resorts are known to be much better than elsewhere, other things being equal. In fact there is hardly a question in my mind that all phthisical patients in whom the disease is in an active state are better treated in sanitaria. The very good results obtained at Görbersdorf and Falkenstein in Germany are to be accounted for largely by the constant supervision to which the patients could be subjected.

It would be well for all invalids to put themselves under the care of a local physician as soon as possible, even if they do not need treatment. Only in this way can it be determined whether they are profiting by their stay, and how long this should continue.

But a few matters remain to be considered. First of these is the question as to what phthisical patients should be sent to Colorado Springs. Of course those in the first stage of the disease offer here as everywhere by far the best chance of ultimate recovery. The earlier patients are sent the better. But even in the second stage, unless the disease is very wide-spread, permanent improvement may be looked for. Patients with cavities or with evidence of rapidly advancing disease are rarely benefited. At the same time such patients inevitably die at home, and as some remarkable cures have been effected by the treatment at high altitude I cannot but regard it as sometimes worth while to give them the chance for life, provided always that they or their friends are made to understand that but little is to be hoped for, and that a certain degree of risk attends the trial. Certain patients with very nervous dispositions are unsuited for residence at high altitudes, the great increase in the nervous excitability interfering with any good which might otherwise be obtained. Serious valvular heart lesions, especially when not well compensated, or any evidence of cardiac weakness and irritability renders the advisability of sending phthisical patients to high altitudes very questionable. Cases of phthisis florida are as doomed in Colorado Springs as elsewhere, and no possible good can be anticipated in such.

To the question in what season of the year patients should be sent one can only answer, in any. Although the spring, as stated, is less pleasant than other seasons, yet it is certainly to be preferred to the spring in the east. Patients may lose valuable time by delaying their departure for any certain season. I would strongly urge against it.

How long patients should stay can only be determined by trial in each case. A year is probably the shortest time ever necessary. For some a life-time is required. Experience seems to show that, once cured, patients have as good a chance of living at low altitudes as though the cure had not been accomplished at a high elevation. I have been unable to find any proof of the wide-spread opinion that those going to Colorado for health can, because of this act, never live again in the east. Patients who have apparently recovered and who come east and again fail in health, would probably have perished long before had they persisted in remaining at a low elevation.

I have not yet said anything of the surroundings of Colorado Springs, and at least a short notice is demanded.

Manitou, about five miles distant, is a well-known place of resort, particularly in summer. It possesses the mineral springs from which Colorado Springs is named, as there are no springs in the latter place. It is pleasantly situated close to the foot of the range of mountains of which Pike's Peak is one, the houses extending up among the foot-hills, and the place having somewhat the appearance of an Alpine village. For a summer residence it would be most pleasant, as it is a centre for tourists and is full of life and excitement. In winter, however, nearly all the hotels are closed. For those desiring to make a prolonged stay in the west; *i. e.* for invalids, I should consider Colorado Springs more agreeable.

Upon the plains and at the foot of the mountains and a couple of miles or so to the south of Colorado Springs is Broadmoor. The view of the plains at this point is superb. But few dwelling houses are as yet built, though doubtless the increasing size of the town will make building at this place and elsewhere in the suburb a certainty in the near future. Broadmoor has already become a favorite resort for the afternoons and evenings, as it possesses a handsome casino with excellent cuisine. During the past summer music has been dispensed by a small orchestra of high order. Attached to the casino are pleasant grounds and a small lake. Near by is the building of the Colorado Springs Country Club, already a favorite institution though but recently organized.

There are certain phthisical patients whose health does not flourish during hot weather. For these, and for any who find summer heat disagreeable, there are a number of situations close to Colorado Springs

which will be found pleasant during July and August. The Ute Pass, leading from Manitou northward contains several such mountain resorts of an elevation of from 7000 to 8000 feet. Among these may be mentioned Ute Park, Woodland Park, Green Mountain Falls, Cascade, and Manitou Park. At a still greater elevation is Summit Park. All of these are easy of access and much frequented by invalids from Colorado Springs. Of course there are numerous other resorts in the State, somewhat farther away, though easily reached. I spent two months at Manitou Park and found the hotel pleasant, and the situation and weather delightful. Through all this region one is practically among the pines. All of these places offer excellent facilities to those desiring to tent during summer.

None of these mountain resorts should be visited before July, and the remarks already made about the necessity of taking care in every respect apply to them with especial force. An invalid should never visit them in summer without taking warm, as well as cool clothing.

VIN. IODINII COMP. IN THE TREATMENT OF CATARRHAL AFFECTIONS OF THE AIR PASSAGES.

BY JOSEPH B. POTSDAMER, A. M., M. D.

PHILADELPHIA.

Under the name of Vin. Iodinii Comp., I have had a mixture prepared by my friend Mr. Emil Jungman, apothecary at Fourth and Noble streets, each teaspoonful containing phosphorus, gr. $\frac{1}{100}$; iodine, gr. $\frac{1}{6}$; bromine, gr. $\frac{1}{6}$; with aromatics and sherry wine. This preparation is very palatable, neither of the drugs being perceptible by the sense of taste. The dose is from thirty drops to a teaspoonful three times daily. A boy of nine can very well bear twenty drops.

The first series of cases in which the remedy was used, was those of chronic bronchitis with acute exacerbations. In all the cases, without any exception, the cough disappeared rapidly. Most of these patients had been treated on previous occasions by the usual routine treatment but the difference was so marked as to at once attract the attention of the sufferers. The expectoration in these cases immediately began to diminish in quantity and to improve in appearance. Among these cases was a man, who, during the intervals of the attacks, was perfectly free from cough but was subject to attacks of dyspepsia which was brought on by indiscretions in diet or the use of the usual remedy for his disease. The use of the vin. iodinii comp. in this case not only agreed perfectly but strengthened digestion.

In cases of hard dry cough without any material physical signs continuing for some time, the cough was arrested in short order by the prompt administration of the remedy.

Cases of nasal catarrh, particularly those with reflex cough received marked benefit from the use of this combination.

The last stage of acute bronchitis which at times is difficult to eradicate promptly, was quickly dissipated by the use of this remedy.

Lately I have been treating cases of subacute and chronic gastritis by this means with apparently equal success. From observations made thus far, I expect to have as good results with this class of cases as with those of the air passages.

This remedy has been used quite extensively by my friends, Drs. A. H. De Young, Geo. Roessler and F. X. O'Neill, and their experience fully corroborates mine.

1333 Franklin St., Phila., Pa.

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting, November 25th, 1891.

Dr. John B. Roberts read a paper on Clinical Contributions to Brain Surgery. (See page 5).

DISCUSSION.

Dr. M. Price:—I should like to ask a question, and that is in regard to the propriety of removing a clot in a case where the operation has been delayed for some time, and where, after trephining, it is found that the clot has become adherent, and where the attempt at its removal is followed by free bleeding. This question presented itself in the case of a young man injured in an ironworks in Phœnixville, some two weeks ago. A small stove shovel was thrown at him, the handle striking and penetrating the skull. For the first day or two there were no symptoms of paralysis. Dr. Shoemaker was called to the case a week or so after the

accident, and at once decided on operation, at which I assisted him. There was incomplete paralysis of the right side, and there had been some slight convulsive attacks. The trephine opening overlapped the clot and the depressed fragment of bone. As I have said, the clot was adherent, and the attempt at removal caused free bleeding. We allowed it to remain, thinking that this would do less harm than the violence necessary to remove it. So far, the result shows that we acted rightly, but what the final result will be I cannot say.

Some of you may recall two murder cases which occurred in 1873. They were both cases of penetrating wounds of the skull through the eyeball, produced by umbrellas. One was a man who, after the injury, came to the Fifth Street Dispensary, where I examined him. He then went to his home in Camden, where he died in a few days. The second case was that of a drunken woman, whom I saw four hours later. She was wounded by her husband in his attempt to ward off her blows. She was removed to the Pennsylvania Hospital, where she died.

Dr. T. S. K. Morton:—I did not understand Dr. Laplace to state that any provision for drainage was made at the time of the first operation. That might possibly have warded off some of the consequences of the injury.

I should like to ask those present their views and experiences as to the results of operations for epilepsy. It has been my fortune to see a good many cases of epilepsy operated upon, not only where the malady originated in the brain, but in other ways, as from phimosis, contracted tendons, neuralgic testicle, etc., and in none of these cases, if my memory serves me right, has there been a permanent cure. In one case, where a contracted tendo Achillis was divided, the seizures remained absent for two years and then returned. It has seemed to me that possibly the profound anæsthesia has something to do with preventing the occurrence of the attacks.

I had one case which was considered traumatic epilepsy, referred to me by Dr. Mills, of a child two years of age, who had fallen, striking its head on a piece of iron. Before the accident there had been no epileptic seizures; after the injury seizures soon began, and recurred with great frequency. A thousand convulsions were counted in a short time. These involved one side of the body, apparently beginning in the centres for the thumb, finger, and arm; extending down the right side; and subsequently becoming general. It was decided to apply a large trephine over the arm centre and see what was there. An inch and a half button was taken out. The dura was thickened, and I dissected it entirely away, leaving a margin of an eighth of an inch all around the trephine opening, so that hæmorrhage could be readily controlled. There being no apparent lesion of the brain, the œdematous pia mater was not opened. The button of bone was not replaced. The flaps were sutured, and catgut drain introduced. The drain was removed ten hours after the operation, when the dressings were found saturated with serum. The wound healed by primary union, and the child went home into the country on the tenth day. I understand that there has been no material improvement in his condition.

Dr. Charles K. Mills:—I can recall ten or twelve of my own cases of epilepsy in which I have had operations performed, and I have been present at fifteen or twenty other operations, so that I have a personal experience of some twenty-five or thirty cases of operation for epilepsy. I have also paid a good deal of attention to the theoretical part of the subject. I am sorry to say that the results in the majority of cases have not been permanently good, but I do not feel altogether discouraged in regard to cranial and cerebral operations for cases of this character. There are reasons why these operations have not succeeded. Some are inherent to the condition, while others are dependent upon errors of diagnosis, while still others are dependent upon the fact that the convulsive habit has been induced by the long continuance of the condition.

I have had two cases of cortical excision. One of these will be reported by Dr. Keen in the coming number of the *American Journal of the Medical Sciences.* In this case a small tumor was found in the centre of the trephine opening, which proved to be a sarcoma. A part of the cortex an inch in diameter was also removed. Although the patient improved after the operation, she is now practically no better than before the operation. It seems to me that in this case the brain and nervous system had been so influenced by the long-continued convulsions that they could not recover. The great difficulty in many of these cases is the late period at which the operation is performed. In nearly all cases of epilepsy, except those due to recent traumatism, the affection has

existed for some time. And then there are secondary changes which cannot be removed by trephining.

I think that of all cases certain classes of hæmorrhage present the greatest likelihood of benefit from operation. These are certain supra-dural and sub-dural hæmorrhages which can be pretty well localized. In the case of Dr. Price, I think that it would have been better to remove the clot as a whole, not perhaps by traction, but by a second trephine opening. In some cases these dural and sub-dural hæmorrhages do lead to permanent epilepsy, even though at first no symptoms are present.

I believe that the most brilliant results, although we have not had them yet, will be in cases of brain tumor. In this class of cases, fibromata offer more chance than other forms of growths, for usually they do not permeate the brain. Some old syphilitic tumors, and a few of other varieties, can be removed. The difficulty in these tumor cases is that they have been left too long.

Dr. James Hendrie Lloyd:—The cause of the paralysis of the arm on the same side as the tumor in this case seems obscure, but I inferred from what Dr. Roberts said, he was not himself certain of the accuracy of this observation. I can hardly see how that tumor could cause hemiplegia of the same side unless it acted as a cerebellar tumor sometimes acts—by downward pressure. In some tumors of the cerebellum there is hemiplegia on the same side from pressure downward on the metor tracts below their decussation. In this case the tentorium would probably prevent such downward pressure, and I hardly see how the alleged fact could be explained in this way. The brain has not been thoroughly dissected, and there may be some other lesion, as hæmorrhage or a secondary growth, which has caused this symptom.

Dr. Roberts:—I was much interested in Dr. Laplace's case, but I do not quite understand the condition of affairs. I understand that the temperature which had been high, had descended to about normal before the operation. I should like to know what was the character of the clot some two weeks after the accident. Was it broken down or partially organized? It seems to me that it would be difficult to get away an old clot of blood which would be ubrinous from such an irregular surface as the base of the skull. I could not help thinking that possibly the clot removed was one due to the manipulations at the base of the brain. Again, was the discharge from the wound serum from blood-clot, or was it cerebro-spinal fluid mixed with a certain amount of inflammatory exudate? While the result has been exceedingly brilliant, I could not help thinking that perhaps if no operation had been done the patient might still have recovered. As the history, as I remember it, seemed to indicate beginning improvement, was it absolutely necessary to keep the wound open for a number of days? I can understand that drainage is necessary in recent brain injuries, but in this case the drain was used at a late period and kept up for some time. The case is one of extraordinary interest, and I simply wish to have these points brought out clearly, as I failed to grasp the points when the report was read. No unjust criticism is intended, but I wish to study the case.

It seemed curious that in my specimen of brain tumor there should be right-sided hemiplegia, but I think that there is a little question that it was on the right side. I inquired in regard to the eyesight, and as far as known there was no blindness or deafness. Very few symptoms were noted, as the patient was in a public institution and made no complaint until a few days before her death. I would have been interested to hear in regard to the probability of the paralysis being due to pressure upon the longitudinal sinus damming back the blood and making secondary pressure, as it were, on the opposite side.

Dr. Laplace:—I would state in reply to Dr. Morton's question, that at the first dressing I put in an iodoform drain, which remained in until the time of the operation. In regard to the points suggested by Dr. Roberts, I would say that I was well aware that on the thirteenth day the clot would not be in the condition that it was on the second day. I knew that it would be fibrinous, and in order to entangle it I devised the little instrument shown.

A few hours after the accident the temperature rose to 104°, and then for the next ten or twelve days varied between 100° and 103°. The coma then began to increase. Because the temperature before the operation was low, it did not follow that the patient was getting well. The patient was really worse. He was more comatose and he could not swallow. He had to be nourished by the bowel. Something had to be done, or he would die. I relieved the intracranial tension and provided for drainage. There must be drainage in cerebral surgery on account of the unyielding nature of the cranial wall.

Selected Formulæ.

FOR LUMBO-ABDOMINAL NEURALGIA.

The following ointment is highly recommended for this affection:

℞ Salicylic acid.....grammes x.
Pulverized camphor..... " vj.
Vaselin..... " xlv.
M. Sig. To be rubbed frequently.

—*Il. Raccoglitore Médico*, November 20, 1891.

MIXTURE FOR SCIATICA.

The following mixture has been employed with success in the treatment of sciatica:

℞ Fluid extract of belladonna...grammes 1.81.
" " " aconite ..... " 5.60.
" " " gelsemium... " 22.00.
M. Sig. 6 to 8 drops every four hours for adults.

—*Il. Raccoglitore Médico*, November 20, 1891.

IN OBSTINATE VOMITING.

In the obstinate vomiting of certain dyspepsias, H. Guimbail recommends washing of the stomach with either of the following solutions:

1.

℞ Bicarbonate of sodium.....grammes iv.
Water..... " M.

2.

℞ Naphthol.....grammes 0.25.
Water..... " M.

—*Journal de Médecine de Paris*, November 22, 1891.

FOR CHAPPED NIPPLES.

In the treatment of chapped nipples Vinay has employed successfully the following formula:

℞ Aristol.....grammes iv.
Liquid vaselin..... " xx.
M. Sig. To be locally applied.

—*Le Bulletin Médical*, November 25, 1891.

INHALATION FOR WHOOPING-COUGH.

Beall recommends, as inhalation for the treatment of whooping-cough, the following mixture:

℞ Thymol.....grammes 1.20.
Phenic acid..... " 15.00.
Essence of sassafras.
Essence of eucalyptus.
Essence of turpentine.
Liquid tar, aa..... " 7.50.
Ether..... " 4.00.
Alcohol, q. s. for " 90.00.
M. Sig. About 30 drops of this mixture are placed on a handkerchief, and the child made to inhale it. This application is to be repeated every two or three hours.

—*La Médecine Moderne*, November 20, 1891.

NASAL DOUCHES.

In the ulcerated condition of the mucous membrane, occurring in the tertiary form of syphilis, the following formula is highly recommended by Ricardo Botey, to be applied in the form of douches:

℞ Pure chloride of sodium.....grammes cxx.
Crystallized phenic acid..... " vj.
Thymol..... gramme j.
M., and make twelve powders. Sig. A powder to be placed in two large glasses of luke-warm water, and the solution applied as indicated.

—*Archives Internacionales de Laringologia, Otologia y Rinologia*, December, 1891.

FOR CHRONIC PHARYNGITIS.

In this affection the following can be advantageously used:

℞ Ergotine.....gr. xv.
Tincture of iodine.....℥ j.
Glycerin.....℥ j.
M. Sig. To be applied three times a day by means of a brush.

—*L'Union Médicale du Canada*, December, 1891.

FOR ASTHMA.

The following mixture, to be inhaled during an asthmatic attack, is of value:

℞ Ether.....℥ j.
Essence of turpentine.....℥ iv.
Benzoic acid.....℥ iv.
Balsam of tolu.....℥ ij.
M. Sig. Applied as indicated.

—*L'Union Médicale du Canada*, December, 1891.

FOR CHRONIC GOUT.

For the local treatment of this rebellious malady, the following formula is recommended as being of great utility:

℞ Etheral tinct. of capsicum.
Spirits of ammonia.
Essence of turpentine.
Linseed oil, aa.....℥ j.
M. Sig. To be applied by rubbing.

It is also said to be of value in articular and chronic muscular rheumatism, and even in chronic bronchitis.

GASTRO-INTESTINAL ATONY.

Dr. Germain Sée (*Il Raccoglitore Medico*, No. 14, 1891), in gastro-intestinal atony with tympanites, uses the following:

℞ Magnesiæ ustæ } aa..... grammes xv.
Cretæ preparat. }
Colombo pulocrizat.....gramme j.
Pulv. vanillæ..... " 0.6.
A half teaspoonful before each meal.

Nux vomica tincture may be given in some cases instead of the above, with a saline purgative.

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LEADING ARTICLE.

THE NECESSITY FOR THE MORE GENERAL USE OF ABDOMINAL PALPATION AND PELVIMETRY IN OBSTETRICAL PRACTICE.

The conduct of labor in this country is empirical rather than scientific. This fact does not reflect so much upon the practitioners as upon the teachers of obstetrics. It has been a popular opinion that American women are so well formed, so vigorous, and healthy that labor with us is physiological, purely, and that much knowledge and certain rules of practice which are of value to the European practitioners are superfluous in our more favored country. This old, popular, soothing theory has been the cause of much lack of knowledge and careless rules of practice in this country, and indirectly has caused many deaths and has heaped dishonor upon our profession.

The fact is we have no such inhabitants as this theory assumes. Especially in our large centres people of foreign birth, or the children of foreigners abound; and our own women are far from physical perfection. Pelvic deformities are common, and are by no means confined to the foreign population.

Under the old rule of practice the practitioner made no special study of an individual pregnancy. He assumed, as he was taught, that all would terminate happily, "because labor is a physiological process." No reflections concerning the relation of the passenger to the passage disturbed his mind; when called to the labor, still no special study of the case was made. Even an arrest of the head at the superior strait did not give rise to questions other than dynamic. Tedious labor he ascribed only to rigidity of the soft parts, or to an unfavorable presentation, or to inertia. Labor not progressing, forceps were applied and traction made, often great and sustained traction. This failing, perhaps a friend was called who repeated the process with a like result. Not until this time was it considered necessary to study the pelvis, and but too often the practitioner was ignorant of the

methods of mensuration to be employed. The results of this method of practice in cases of pelvic deformity are but too well known to us. Perhaps a dead or spoiled baby was delivered after the greatest effort, the process inflicting bruises and lacerations on the exhausted mother. Or at the last, delivery was effected by embryotomy. Cæsarean section was rendered too dangerous to be employed except under absolute indications, the mother being exhausted as a rule before this was considered. And only too often septic infection and death of the mother as well as the child closed the scene.

Fortunately for our women and for the good name of American medicine a new era has dawned. Students at the present time are taught the anatomy of the deformed as well as of the normal pelvis, and the mechanism of labor peculiar to the several varieties of deformity of the pelvis. Abdominal palpation and pelvimetry also are taught, and the rule of practice laid down is, that all primiparæ should be carefully studied at least six weeks before term, so that any abnormality in the pelvis, or in the presentation of the fœtus may be known. And the same is true of multiparæ who have had difficult labor.

This rule of practice places the medical attendant on an entirely different footing. Each case of pregnancy and labor is one for scientific study. If but slight deformity is found, nature can be trusted to overcome the difficulty with perhaps minor assistance; if the deformity be considerable, labor can be induced at the thirty-fourth to the thirty-sixth week; or if the deformity be great, Cæsarean section can be determined upon and done at term as a formal operation with all the care usual to abdominal sections. On the other hand, if the pelvis is normal, as is the rule, practitioner and patient are reassured, since the only difficulties likely to be encountered are dynamic.

If only all practitioners would follow this beneficent rule American practice and results in the management of cases of labor in deformed pelves would cease to be a reproach. Especially could the percentage of craniotomies be decreased by timely resort to the induction of labor, or to the Cæsarean section, in proper cases, before the patient's chances for recovery are jeopardized by attempts at delivery by forceps or version.

The outlay of time in examining a patient by abdominal palpation and external pelvimetry is inconsiderable, and this is sufficient to separate the normal from the abnormal cases. Thus it is seldom necessary to make a vaginal examination. The benefit derived by the practitioner himself, more especially from the palpation, is inestimable. There is no better way of cultivating the *tactus eruditus*, so valuable to us all. Experience makes the results of external palpation quite exact, so that in the diagnosis of the preventation and position of the fœtus it becomes more valuable than the internal examination.

In time, undoubtedly, this practice will become general, but that day will be hastened, women in travail more surely relieved, and the good name of our profession conserved if every one who has followed the old system will familiarize himself with the principles of obstetrical abdominal palpation and pelvimetry, and apply them in his daily work.

Obituary.

E. B. P. KELLEY, M. D.

Dr. Edw. Bentley Perley Kelley was born at Campbellstown, Lebanon Co., Pa., 52 years ago. His early education was received at Strausburg Academy, and his medical diploma from Jefferson Medical College, at Philadelphia. After his graduation he was for a time connected with one of the Hospitals in the city of Philadelphia. Immediately upon the breaking out of the civil war he entered the Union Army as a surgeon, and was soon promoted to the rank of Brev. Lieut. Colonel, U. S. Volunteers; and later Colonel, and was Surgeon-in-chief, 1st Div., 1st corps, Medical Division, 6th Army Corps.

He was present at 52 battles and at the surrender of Gen. Lee, and was finally discharged in August, 1865. What a splendid

record of service to his country; no greater encomium could be needed. After leaving the army, he came to Perreniville, N. J. and entered into partnership with the late Dr. T. J. Thomason, and here he remained about 9 years. On the 15th October, 1873 he married Miss Frances Bulkley, of Cranbury, N. J., and July 24, 1874, settled at Perth Amboy, N. J., where he soon built up a large and lucrative practice. He died at his home, November 25, of cerebral hæmorrhage, after only a few hours illness, and never regained consciousness from the beginning of the attack.

Dr. Kelley was an excellent surgeon and a very skilful physician—two qualifications very rarely combined.

He was a kind husband and an indulgent father; a man of fine presence and a high-toned honorable gentleman.

He was the trusted advisor of hundreds of families, and by his many acts of genuine charity endeared himself to an unusually large circle of true friends.

He was a rigid observer of true medical ethics, and although he considered his first duty was toward his patient, no physician ever disliked to meet him in consultation.

He was a member of the Grand Army of the Republic, and was never absent from a reunion of the Army of the Potomac from the time of its organization.

He leaves a widow, one daughter and a brother to mourn his loss.

He was laid to rest in the cemetery of the Second Presbyterian church, at Cranbury, N. J., on Saturday, November 28th, 1891.

A delegation of Odd Fellows, Knights of Pythias and his G. A. R. Post were present.

J. C. Holmes, M. D.

Correspondence.

DR. MASSEY'S CASE REPORTED AT THE MEETING OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY, DECEMBER 12TH.

Editor Medical and Surgical Reporter:—I was unfortunately not present at the las meeting of the Philadelphia County Medical Society, the proceedings of which appeared in the Reporter of December 12th, but beg your permission to comment briefly on the final paragraph of Dr. Price's remarks in closing the discussion on his paper, as they appear on page 940.

It is not always possible to intelligently respond to the discussion on a paper that has taken a wide range, yet I know of few instances where the responder was so wide of the mark as when Dr. Price responded to Dr. Woodbury. The case referred to by Dr. Woodbury was treated by me by the intra-uterine or Apostoli method after a non-electrical exploratory puncture, and this was distinctly stated by him. In view of the brilliant result gained from this harmless treatment it is incomprehensible how the case can be regarded as a "proof of the value of operative treatment", or why we should be congratulated on not having a death instead of benefit, unless, as was doubtless true, the tenor of Dr. Woodbury's statement has been misunderstood. The evidence of Dr. Woodbury's case was strongly in favor of the electrical treatment of fibroid tumors, and as the readers of the Reporter can see the proof, in the shape of a well woman, any day, I should hate to have them think otherwise about it.

Yours truly,

G. Betton Massey.

THE TYPEWRITER MATTER.

To the Editor of the Medical and Surgical Reporter:—Having a considerable acquaintance with typewriters, and having done all my own work on the instrument for the last three years, I am inclined to think that Dr. Sherman is wrong about the machine being the cause of injury to the eyes, although I fully agree with him that stenographic writing is bad for weak visual organs. Several articles written by myself as to the value of the instrument in such maladies as writer's cramp, incipient paralysis, etc., were based on the ideas had from those who suffered from such troubles, and who were able to do their work with the machine, but not with the pen, and I might extend these remarks by showing, (if space permitted), that in precisely such disorders as eye-strain, the typewriter is a most valuable adjunct in securing a cure.

Now, it is not at all necessary to look at the keys when writing, and experts do not do so as a rule; the action of the fingers is almost automatic, as it is in playing the piano or organ. I seldom look at the keys of an organ when playing, the music taking the attention so far as seeing is concerned, in case the piece is played from notes. To try this fully, although I usually do not look at the keys of my machine except casually, I have written this without looking at them at

all, hence one or two slight errors may exist. Although not feeling in good shape for writing anything, I have done this at the best speed possible, as a matter of experiment, and not being an expert, it will be seen that the work can be done so as to save the eyes by one who cares to learn a little, instead of injuring them. In speaking of the apparatus I refer, of course, to reputable machines, not the small playthings which require constant inspection whilst writing with them, (or trying to do so.) Anyone who uses a "Remington", will find his eyes protected equally with his finger muscles, to say nothing of the time saved to himself in writing, and to his reader in deciphering what he wants to say.

The above contains about three hundred and fifty words, and was written in eighteen minutes, allowing a few seconds to run the ribbon back. The fact that one occasionally looks at what has been written does not militate against the machine, for we must do so when the pen is used, or the pencil; moreover, we actually follow the pen with the eye all the time we are writing. Maybe the doctor can find something wrong about the stomach or the eyes not due to the hard work he does with his typewriter.

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Book Reviews.

SANDERS' QUESTION COMPENDS, NO. 21. ESSENTIALS OF NERVOUS DISEASES AND INSANITY: THEIR SYMPTOMS AND TREATMENT. A MANUAL FOR STUDENTS AND PRACTITIONERS. By John C. Shaw, M. D., Clinical Professor of Diseases of the Mind and Nervous System, Long Island College Hospital Medical School; Consultating Neurologist to the St. Catherine's Hospital, and Long Island College Hospital; formerly Medical Supt. of the Kings County Insane Asylum.

This brief synopsis of nervous and mental diseases contains much to commend it to the student and busy practitioner of medicine. Its arrangement is simple and consistent with the modern views of the pathology of the affections treated of, as far as possible. The author has wisely recognized the true scope of his work, and has not marred its real value as a synopsis by departing too far from the general outline of his subject. Each disease is regularly dealt with regarding definitions, etiology, symptoms, diagnosis, prognosis, and treatment. The forty-eight original illustrations, selected chiefly from the author's private practice, are well executed and add value to the work.

The portion devoted to Insanity is of particular interest to the student. Since it presents in a few words much valuable information regarding what is to most students a very obscure subject.

Necessarily only parts of some subjects could be presented, and indeed one is rather amazed to find nearly all the diseases of the nervous system and mind treated in one little book of 190 pages.

One feature seems misleading and inappropriate in a book of this kind. We refer to the incomplete bibliography which is attached to the description of various nervous diseases. The bibliography of hereditary chorea is an instance of this, and this feature of the book is a literary blunder. With this exception we heartily recommend this little volume to the student and the profession generally as a concise, readable and faithful synopsis of diseases of the mind and nervous system.

PERISCOPE.

THERAPEUTICS.

RESORCIN IN LARYNGEAL PHTHISIS.

Dr. Tymowsky publishes in the *Monatschrift für Ohrenheilkunde* a contribution to the treatment of laryngeal phthisis. He considers that when the hygienic surroundings of the patients are favorable, rest and liquid nourishment are sufficient to allow simple erosions and even superficial ulcers to heal. When the latter are of greater depth, and the surrounding tissue is infiltrated, cocaine and alkaline inhalations must be administered; and when the inflammation has been reached by this treatment, lactic acid in a solution of the strength of from 50 to 80 per cent., or an 80 per cent. solution of resorcin, may be applied successfully. Iodoform, to be useful, must be applied twice a day, and only when the ulcers are covered with abundant granulations. Dr. Tymowsky calls resorcin the most convenient of all these remedies, because it gives no pain, and need only be applied once a day. The solution must, however, be of the strength of 100 per cent. for unhealthy-looking ulcers which are undoubtedly of tuberculous character, when its effect may be depended on. At the same time inhalations of from 2 to 5 per cent.

solution of resorcin may be substituted for those of cocaine. Resorcin consequently is antipyretic, antiseptic, and hæmostatic, and may be given internally in quantities of three or four grammes a day. It is also used externally in various forms. Dr. Unna has administered it for a long time past in chronic recurrent ulcerations of the skin.

PHENOCOLL HYDROCHLORIDE IN MALARIA.

Prof. Albertoni, of Bologna, makes a very important communication, relating to the use of phenocoll hydrochloride in malaria. Prof. Albertoni states that he has carefully and extensively employed the remedy in his practice, and that the most excellent results ("I risultati sono bellissimi") were effected in a number of severe malarial cases. A comprehensive and highly eulogistic report has been prepared and will be published in an early issue of the "Academia Medica." This is highly valuable information; quinine has heretofore been almost the only available remedy for malaria, and even this occasionally disappoints. Phenocoll is already favorably known as a superior antipyretic and is also employed with success in the treatment of rheumatism.

THE SUBCUTANEOUS INJECTION OF ATROPIA AS A HEMOSTATIC.

M. Bierwirth (*Journal de Medecine de Paris,* October 25th, 1891) has obtained from the subcutaneous administration of from 3 to 6 deci-milligrammes [$\frac{1}{200}$ to $\frac{1}{100}$ grain] of atropia a prompt hæmostatic action in several cases of hæmorrhage, epistaxis and hæmatemesis, which ergotin and other unsual remedies had failed to control. The hæmorrhage was always arrested in about ten minutes. In one patient the injection had to be repeated three times; but in all the others one single injection sufficed to permanently arrest the loss of blood. Dr. Hausmann, of Méran, has also successfully resorted to the injection of atropine in hæmoptysis. Afterward, another German physician, Dr. Tacke, of Wesel, found atropia, hypodermically administered, an excellent method for the arrest of excessive menstrual loss.

The hæmostatic action of atropine is explained on the ground of an action directly the opposite of that pertaining to ergotin. While the latter agent causes contraction of the capillaries, atropia causes their dilatation by paralyzing the vaso-constrictor nerves, as has been demonstrated by Graham Brown. By increasing the quality of blood in the general capillary circulation, atropine diminishes the afflux toward the point of hæmorrhage, favors coagulation and arrest the hæmorrhage.

TUBERCULIN IN THE TREATMENT OF LUPUS.

Eichhoff (*Therap. Monatsh.*, Sept., 1891) relates his experiences extending over six months. Of twenty cases of lupus only one, occurring in a lad, aged 15, was completely cured, there being no relapse in six months' time, when the patient was last seen. In a second case of lupus acneiformis of the face in which the tubercle bacillus was found, a fresh set of lupus nodules appeared during the treatment. When, however, local treatment was combined with the use of tuberculin, the further development of these nodules was very slight, and the patient was discharged in five months' time with nearly all of them healed. Eichhoff would explain this by the reaction being insufficient to make a way through the skin, and thus time and opportunity were given for the absorption of the bacilli. This is the danger in the treatment, and consequently the lymph should be used in conjunction with local treatment. Of six cases thus treated two relapsed, and of four others treated with tuberculin alone three relapsed; of the remaining ten, part were discharged better and part were still under treatment. A case of prurigo and another of tuberculous eczema (Unna) were cured by the lymph. The lymph did not harm the patient in any case, and Eichhoff believes it to be a specific for lupus (tuberculous) processes, and that it does not act favorably on fresh tubercle. He says it is neither right to discard the remedy nor yet to look upon it as harmless, or as acting without fail.—*Brit. Med. Jour.*

LAVAGE IN VOMITING FOLLOWING CHLOROFORM.

Dr. Lienevitch (*Rev. Ther. Med. Chir.*) proposes to relieve the vomiting which follows the administration of chloroform, by lavage. He believes that not only the chloroform, but as well the irritation of the peritoneum produced by the antiseptics, is accountable for this symptom. He employs the tube of Faucher and washes out the stomach with warm water in which ½ to 1 per cent. of bicarbonate of soda has been dissolved, until the water returns clear. The

abdominal walls are compressed (after an operation of laparotomy has been performed) during the washing. The results are excellent, in that, if necessary, water sufficient for the needs of the patient can be left in the stomach. The general condition improves, because there is freedom from nausea, gaseous accumulations, vertigo, and epigastric distress.

SULPHAMINOL, OR THIO-OXYPHENYL-DIAMIN: A DISINFECTANT.

Dr. Wojtaszek communicates to the *Przeglad Lekarski* some observations he has made on sulphaminol, which has been brought out by an eminent German firm as a new disinfectant, which is said to split up with the body into carbolic acid and some compounds of sulphur. So far from this being the case, however, Dr. Wojtaszek found that large doses might be given to animals, both hypodermically and by the mouth, without producing any effect whatever; also that when applied as a dressing to cancers, soft chancres, and other open sores, it exercised no disinfectant action. He has therefore come to the conclusion that for therapeutic purposes it is inert.

TREATMENT OF BUBOES.

Dr. S. Cordier (*Ugeskrift for Laeger*, Nos. 4–5, 1891) punctures buboes as early as possible, injects a strong nitrate of silver solution into the cavity, and covers the place of puncture over with iodoform. Healing soon follows. Sometimes the puncture must be repeated.

TREATMENT OF INJURIES TO THE HEAD.

Dr. Senger, of Crefeld has proposed a new method of treatment with the object of facilitating repair in suppurating wounds of the head, with exposure of the cranium. He first arrests the phlegmonous and puriform process by surgical and antiseptic treatment —that is, by incisions, drainage, and dressing,—and so reduces the complicated injury to a simple cranial wound, which of course still produces a certain quantity of pus every twenty-four hours. A wet antiseptic dressing is then applied to the wound for two or three days, and when this is taken off the first layer of the tabula externa is removed with the help of a small chisel, in little scales, until drops of blood are seen in the bone. In from two to three days granulations protrude from the bone, and entirely cover it in from eight to ten days, and healing subsequently progresses as in other wounds. Suppuration ceases in proportion to the growth of the granulations. It is also possible to produce granulations by drilling several small holes in the external table until blood is seen; but the chisel is preferable, as it is difficult to estimate the depth of the drillhole, and the drilling takes more time than the chiselling. A still more serious objection to the former is that the holes get filled up with bone dust. In neither method is it necessary to give an anæsthetic, as but little pain is felt during the trifling operation.—*Lancet.*

OXYGEN INHALATION.

Neumann (*Therap. Monatsh.*, October, 1891) says that experiments up to now have been concerned with the inhalation of (1) as pure oxygen as possible with no increase of pressure, (2) a mixture of oxygen (63 per cent.) and nitrogen under ordinary pressures and (3) air with high percentage of oxygen and with increased pressure, and the authors communications refer to this. The following conditions must be present: (1) the production of the gas must take place in a manner which can be observed and regulated, (2) the amount of gas must allow itself to be approximately calculated with each respiration, (3) it must not irritate, and therefore (4) it must be mixed with air, and (5) it must be inspired under a moderately increased pressure. The author then describes his apparatus. Patients soon learn how to use it. The pulse, at first quickened, is ultimately slowed. No unpleasant head symptoms arise. There is no palpitation; in fact, the heart's action is regulated. Sleep is often induced, even in men. In many patients the night's rest has been improved, the breathing has been rendered easier, and there has been a general feeling of increased strength. In three cases treated at the same time by Koch's method, the fever disappeared in two, and was lessened in the third. The author thinks the action of certain drugs as of iron in chlorosis, may be increased by oxygen inhalation. He has treated very severe cases of anæmia, a case of convalescence from pleurisy, cases of phthisis, and a case of sepsis and of diabetes, with good results, and he appends a few notes on them. Neumann thinks it may be of service in gout, as it diminishes the amount of uric acid in the urine.—*Brit. Med. Jour.*

ANTIPYRIN IN AFFECTIONS OF THE PHARYNX AND LARYNX.

M. E. Saint-Hilaire (*Archives de Laryngologie*, September, 1891) refers to a recent paper by himself and M. Coupard, in which they described the therapeutic value of antipyrin, applied locally, in certain throat affections. By its means they were able to cure a variety of complaints dependent on undue sensibility of the pharynx and larynx, such as spasmodic cough, sensations of pricking in the throat, or of a foreign body, etc. These results seemed due to a local anæsthetic effect of antipyrin, and M. Saint-Hilaire has performed numerous experiments with the view of determining the anæsthetic properties of antipyrin. He draws the following conclusions from these experiments: 1. The anæsthesia produced by cocaine is complete, and applies to tactile sensation and to sensations of heat and cold. 2. The anæsthesia lasts from one to two hours. 3. In order to produce this effect the strength should be not less than 30 per cent. The solution employed by M. Saint-Hilaire is of a strength of 40 per cent. He thinks that antipyrin will be found especially useful in cases where a prolonged analgesia is desired; thus, in tuberculous ulceration, the pain may be kept under by painting the parts with the antipyrin solution two or three times a day. It will be found useful in those affections where either the reflex element or the painful element predominates. Moreover, antipyrin possesses an antiseptic property which will render it additionally useful in certain cases. Of course, when for the purpose of operation an anæsthesia of short duration is required, cocaine is preferable, as the effect is more rapidly produced, and is more complete while it lasts.—*Brit. Med. Jour.*

ON THE THERAPEUTIC VALUE OF NERVE-STRETCHING.

Dr. Archimede Mischi comes to the following conclusions:

1. Nerve-stretching constitutes, by its manner of action, a special therapeutic process. This influence is felt even as far as the nervous centres and in the medulla oblongata in particular. A paralysis of sensation, with relative conservation of motility, is produced.

2. Nerve-stretching is an efficacious method of treatment in those cases in which the lesion is peripheric; hence, it is useful in the treatment of the various neuralgias, tic-douleureux, spasms, traumatic contractures and reflex epilepsy.

3. It must be condemned in tabes dorsalis and various affections of the medulla oblongata, in which it is never successful, often injurious and, finally, sometimes fatal.

4. It offers but the slightest probability of success in the treatment of tetanus.—*Il Raccoglitore Medico*, Dec. 10, 1890.

CRESOL SOLUTIONS.

The question of securing a neutral solution of the cresols has been the subject of recent investigation, the custom of emulsifying them by means of soap or alkalies, being open to many objections. It has been ascertained (*Chem. Zeit.*) that the addition of cresol to a very concentrated aqueous solution of sodium salicylate, produces a mixture which may be diluted with water without fear of the cresol separating on standing. This process does not result in the formation of any double salt. The ortho-meta or para-cresol may be used, and the sodium salicylate may be replaced by salicylates of other bases or by the salts of ortho-oxybenzol carboxylic acid, or of the phenols and naphthols, the latter possessing the solvent property in a greater degree than the former. Experiments demonstrate the superiority of solutions effected by means of sodium cresotinate. A ½ of 1 per cent. solution is said to be equally as efficacious for bactericidal purposes, as a 5 per cent. solution of carbolic acid, and to be free from its caustic and irritant effects.

MEDICINE.

OXALURIA AND HÆMATURIA.

Dr. Francis D. Boyd writes in the *Lancet* that very little is known of the clinical significance of the excretion of oxalate of lime in the urine in the condition described as oxaluria. Numerous cases of so-called cyclical albuminuria, accompanied by oxaluria, have been described, in which by some authors the albumen was ascribed to irritation of the kidneys by the crystals of oxalate of lime. That some of the albumen in those conditions is derived from the urinary tract is highly probable, but the following case seems to support the view that the excretion of crystals of oxalate of lime does irritate the kidneys in some cases.

Mrs. M——, a young woman of a very rheumatic history, was taken ill during the night of July 20th with severe pain in the

lumbar region. She likewise had headache and felt very feverish. Next morning the pain was easier, though the headache was still present, and she noticed that her urine had become of a bright red color. There was no pain on micturition. He saw her on the following day; she was then complaining of headache. Pain in back still present; no œdema. First sound of heart loud and accentuated. Pulse 100, full, and of rather high tension. Urine faintly acid, containing blood in large quantities and albumen. Under the microscope the deposit was seen to be composed of blood-corpuscles, crystals of oxalate of lime, and numerous tube casts containing epithelial and blood cells, oxalate as well as crystals. On inquiry he found that for three days before the attack the patient had been partaking largely of rhubarb, which she said she knew never suited her. She was directed to take nothing but milk, to rest in bed, to keep the bowels freely open with Friedrichshall water, and nitro-hydrochloric acid was prescribed. On the following day there was marked improvement. The pain in the back was gone, the blood and casts were decidedly diminished, and urine was passed in larger quantity than formerly. The oxalates were still present. By July 26th the blood, albumen, and casts had entirely disappeared, and the patient was feeling quite well.

In the *Monthly Journal* for August, 1849, Begbie describes certain cases of what he terms the oxaluric diathesis, but in none of his cases, though there was pain in the back, does there seem to have been kidney irritation produced. The passage of the oxalates in the case above quoted differ from his, in that the oxalic acid seems to have been absorbed directly from the stomach, and not to have been produced during the process of digestion and assimilation. That there was in this case a true nephritis he thinks there can be no doubt from the presence of the casts, and the oxalate of lime crystals seem to be the cause, and not a mere concomitant.

PRIMARY SPLENOMEGALY.

M. Bruhl (*Archiv. Gén. de Méd.*, June, 1891) describes the disease first called splenomegaly by Professor Debove, and characterized by (1) hypertrophy of the spleen; (2) progressive anæmia without leukæmia; and (3) absence of glandular enlargement. It may begin with general symptoms of anæmia, with pallor, fatigue on the least exertion, and debility not unlike Addison's disease. More rarely it commences with pain in the left hypochondrium, nausea, vomiting, and even obstinate diarrhœa. These attacks of pain, except for the locality, resemble hepatic colic. They are due to a perisplenitis. The spleen is enlarged, somewhat tender, and the surface slightly irregular. Frequently there is a pleurisy of the left base. But even in the second group of cases, a history of previous weakness, loss of color or epistaxis can generally be made out. When the disease is fully developed the anæmia is not essentially different from other forms of anæmia. Examination of the blood reveals nothing that is pathognomonic. The red cells are much diminished in numbers, and the amount of hæmoglobin may be reduced to one-half. In most cases the number of white cells is not increased. No micro-organisms have been found. The enlargement of the spleen is progressive, uniform, and considerable. Sometimes the liver is enlarged. There may even be an interstitial hepatitis. Digestive troubles and constipation are usually present. Hæmorrhages do not often occur. Epistaxis is the most common, and, in the advanced disease, petechiæ may be present, especially on the legs. The observations on the urine are few and discordant. The glands are not enlarged, except on occasional slight hypertrophy of the mesenteric and retro-peritoneal glands. In the last stage of the disease cachexia is present; the appetite is lost; there may be diarrhœa and hæmorrhages; fever is exceptional. As to the course of the disease, it lasts from six months to two years, advancing steadily to a fatal end. Sometimes, however, it progresses by fits and starts, and rarely there may be an amelioration or even a quasi-recovery. M. Bruhl says that surgical interference (splenectomy) has brought about a complete cure. The complications are pneumonia, perisplenic abscess, and perforation of an ulcer of the stomach or intestine. Splenomegaly must be distinguished from leukæmia, from tumors of the spleen, from amyloid disease, and from the enlarged spleen accompanying cirrhosis of the liver. In the grave forms of anæmia the spleen is rarely much enlarged.—*Brit. Med. Jour.*

SYPHILITIC DISEASE OF THE LUNGS.

Dr. Haslund distinguishes two forms of pulmonary syphilitic disease: 1. The diffuse form—an increase of the interstitial connective tissue. The affection always begins at the root of the lung and extends thence 2. The gummatous form—one or many gum

mata scattered through the lung, except the apex, which is rarely affected. Both forms often coexist. The course of the disease is sometimes very rapid, death occurring in from two to six months. In other cases the disease causes no symptoms, and the presence of pulmonary disease may be discovered only at the autopsy. In the early stages there are no physical signs; later on, in some cases, dulness on percussion over the root of the lung is noticed, and inspiration becomes rough and sharp. Toward the end respiration acquires a cavernous character. Syphilitic lung disease is difficult to diagnosticate during life. The distinction from phthisis is difficult. The diagnostic points on which Professor Haslund relies are: 1. Absence of tubercle baccilli. 2. Location; the apex is rarely affected in syphilis, almost always in tuberculosis. 3. The downward progress of the case is much more rapid in syphilis without appropriate treatment than in phthisis. 4. Absence of fever in the earlier part of the disease. 5. History of syphilis. 6. Results of antisphilitic treatment. The prognosis is good if suitable treatment (mercury and iodide of potassium) be adopted in time. The disease is rare. Professor Haslund has, however, diagnosticated and successfully treated several cases.

THE BACILLUS OF ENTERIC FEVER.

In the *Centralblatt f. klin. Medicin*, September, 1891, Dr. Lehmann, when speaking of the recent contributions by Dr. Babes and M. Cassedebat to this subject, says that comparatively a short time ago a fairly sure recognition of the typhoid bacillus, even outside the body, seemed a task easily to be performed by the help of the culture on the potato, but that now it must be looked upon as very difficult, if not impossible. When this difficulty was recognized, other distinctive signs were sought for, as, for instance, the negative indol reaction, the growth on colored media, or upon potato gelatin, but none of them are really characteristic. M. Cassedebat (*Ann. de l'Institut Pasteur*, 1890, No. 10) found three kinds of bacilli resembling that of enteric fever in the Marseilles drinking water. He thought he could distinguish them by the color of the inoculation into gelatine, by the behavior of old bouillon cultures, and by the growth in colored media. Dr. Babes (*Zeitschrift für Hygiene*, Band ix, Heft 2), on the other hand, would seem to be no longer in a position definitely to separate the nineteen varieties he obtained from the bodies of individuals dead of enteric fever, since he adds that in several of the varieties the tendency to lose many of their characteristics has been observed.—*Brit. Med. Jour.*

SPINAL SYMPTOMS OF GONORRHŒAL ORIGIN.

Drs. Spillman and Haushalter (*Revue de Médecine*, August, 1891) reports two cases in which spinal symptoms were associated with gonorrhœa. In each case the sequence of events was (1) pregnancy, (2) vaginitis contracted in the later months, (3) pains and swelling of joints, especially of the knee, (4) normal labor, (5) the onset of nervous symptoms. These were violent lancinating pains in the extremities, tingling of the feet, great muscular atrophy; the sphincters were not, however, affected, neither was the sensibility to pricking, touch, or heat impaired; the reflexes also remained intact. A bedsore formed rapidly on the sacral region. Under treatment, however, all these alarming symptoms disappeared, and even the atrophy of the muscles was almost entirely removed by a course of massage, etc. The authors are inclined to think that the knee swelling was secondary to spinal lesions.—*Brit. Med. Jour.*

SCLERODERMA.

From clinical obervations in three cases and a post-mortem study of one, Dinkler, (*Deutches Archiv für klin. Med.*, Bd. xlvii., H. 5 u. 6) maintains that scleroderma is a disease *sui generis*, characterized at the outset by firm swelling and at a late stage by cicatricial-like atrophy of the cutis. The swelling is frequently preceded by vasomotor disturbances. Pigmentation and desquamation may take place, but are not distinctive. Scleroderma may be diffused or circumscribed. The disease process is not restricted to the skin; it may appear in the brain and in striated muscular tissue. The etiology of the disease is obscure; the affection may appear spontaneously or it may follow acute or chronic injuries. It is anatomically characterized by hyperplasia of the connective tissue and by vascular changes. The disease of the vessels involves only individual arterial branches and corresponds to periarteritis, mesarteritis and endarteritis. Clinical observation and anatomical investigation render it probable that the disease is dependent upon an inflammatory process especially involving a varying arterial distribution. The prognosis is dubious. Treat-

ment must be constitutional, conjoined with the application of the constant current and warm baths.

SURGERY.

NEW OPERATIONS ON THE PROSTATE AND BLADDER.

Küster read a paper on this subject before the Deutschen Gesellschaft für Chirurgie, 1891, which is abstracted in the *Centralblatt für Chirurgie*, 1891, No. 26. After referring to Kümmel's method of operating by suprapubic cystotomy for enlargement of the prostate, he states that the researches of Von Dittel have shown that the obstruction to the flow of urine comes more often from the lateral lobes than the median, and that these can be better reached from the perineum than from above the pubis. Küster has operated three times, making his incision in the median line of the perineum and then transversely around the left side of the anus. There is great liability of wounding the urethra, and this occurred in two of his cases. It can, however, by care be avoided. In one case a fistula remained which has not yet closed. All three patients can void their urine in a stream and are very much improved. The permanency of the benefit cannot be determined, as the time which has elapsed since the operations is only from two to ten months. He also performed a total extirpation of the prostate and bladder in a man, aged 53 years, affected with carcinoma of the prostate with papillary degeneration. The patient was placed upon Trendelenburg's support and the bladder exposed above the symphysis. The upper edge of the pelvis was chiselled away, as advised by Helferich, and the bladder was opened to confirm the diagnosis, the cut being again sewn shut. With a blunt instrument the bladder was freed from the surrounding parts and an opening into peritoneal cavity closed with sutures. A median incision was made in the perineum and the urethra divided and the prostate separated with blunt instruments and scissors. In order to find the ureters more surely, the bladder was again opened. After they were exposed they were loosely tied and cut obliquely upward and backward. A few strokes of the scissors then freed the bladder. A male catheter was introduced into the rectum and an opening made. The mucous membrane of the ureters was sutured to that of the rectum, the knots being placed in the bowel and additional catgut sutures inserted. The wound was tamponed. The patient, who had had bronchial catarrh previous to the operation, died of a lobular pneumouia. The catgut sutures of the ureters gave away too soon and allowed urine to flow through the wound. Küster was induced to perform this operation by the success which he had in the treatment of a case of vesico-vaginal fistula by Rose's method. He made a fistulous communication between the vagina and rectum and then closed the vagina. The patient was thus enabled to retain the urine for two hours in the rectum — *Univ. Med. Mag.*

SUBMUCOUS RESECTION OF THE INTESTINE.

Dr. Kummer finds that the chief fault of the ordinary suture of the intestine is its tendency to cause a stenosis, which may be followed by intestinal obstruction, perforation, or paralysis. To remedy this disadvantage he has undertaken experiments on animals, and was led to adopt the following method: He dissects a cylindrical flap of mucous membrane, about 1½ cm. long, from the transverse section of the gut, and then unites mucous membrane with mucous membrane. The sero-muscular flaps are folded back in such manner that the serous margins are approximated, and sutured in this position. The sutures which in the ordinary Lembert suture protrude into the gut are placed on the outside of the intestine and thus do not narrow the lumen.— *Centralbl. f. d. gesammte Therapie*, August, 1891.

SPECTROSCOPIC EXAMINATION OF THE BLOOD IN SURGERY.

At the recent French Surgical Congress M. M. Henocque and Bazy reported the results of a series of examinations of the blood with the spectroscope made on persons who were compelled to undergo surgical operations. According to these investigations the demonstration of the quantity of hæmoglobine in the blood affords the surgeon some valuable information in cases where it is necessary to decide whether the patient's health is sufficiently good to permit of the performance of an operation which may not be urgently required. In ovariotomies and laparotomies undertaken for the removal of tumors it is of advantage to determine the degree of anæmia and the condition of nutrition by this method, so that the operator may be able to select the most favorable time for operation.

The authors also made some exceedingly interesting experiments with the view of studying the effects of chloroform anæsthesia upon the quantity of oxy-hæmoglobin in the blood and upon tissue metamorphosis. These investigations were carried on before, during and after the performance of surgical operations. It was demonstrated in eight cases of major operations that chloroform actually tends to augment the quantity of hæmoglobin in the blood, unless a condition of asphyxia is produced, and that this quantity may remain stationary despite severe losses of blood. One of the constant effects of chloroform anæsthesia, however, is to retard the reduction of oxy-hæmoglobin; that is to say, it decreases tissue metamorphosis. These phenomena therefore illustrate that chloroform does not exert a toxic influence on the blood, although it has a marked effect in retarding the vital chemical processes in the body. In cases of sudden death at the commencement of chloroform anæsthesia a complete arrest of tissue metamorphosis takes place, and to this, in the authors' opinions, should be attributed the extraordinary severity of this form of syncope. They also believe that these facts demonstrate the advantage of determining before operation whether an individual tendency to retarded tissue metamorphosis be present.

In our last year's August number we commented upon some experiments of Prof. Mikulicz relating to the same subject. In striking contrast to the results obtained by M. M. Bazy and Henocque, however, Dr. Mikulicz found that the prolonged administration of chloroform produced a decrease of hæmoglobine even in operations unattended with loss of blood. This fact simply illustrates the wide discrepancy in the results obtained by different investigators of the same subject.—*Internat. Jour. Surg.*

COMPRESSION OF THE CAUDA EQUINA—REMOVAL OF A TUMOR—RECOVERY.

Laquer reports in the *Neurolog Centralblatt*, 1891, No. 7, the case of a young man, aged 19, who had been suffering since September, 1888, from violent pain in the sacral region. The patient himself localized the pains from the very beginning in the interior of the sacral bone. At night, and frequently during the day, after long continued sitting and standing the pains become more violent. Finally he had to abandon his work, but absolute rest, careful treatment and various remedies failed to procure relief. Status in December, 1889: no impairment of motor power or of sensibility, no muscular atrophy; electrical reactions, deep reflexes, vesical and rectal functions normal; no incoördination. The dull, piercing pains were so acute at night that they deprived the patient of sleep; they irradiated occasionally on the posterior surface of the thigh down to the fossa poplitea. Galvanic treatment and chloral gave much relief, so that the original diagnosis—neuralgia of the plexus sacralis, perhaps neuritis—seemed corroborated. But in March, 1890, the pains returned and in September very large doses of chloral and morphine were of little avail. At that time the principal symptoms were: strictly localized pain in the middle of the os sacrum, pain on pressure at the same spot; both musculi recti femoris weak and slightly atrophied; transient paresis of bladder and rectum; the knee-jerk abolished on one side and very faint on the other; sexual functions feeble; decubitus on the right trochanter; complete absence of all inflammatory changes in the vertebral joints and in the bones; no R. D. Due consideration of the symptoms and the exclusion of any disease originating in the rectum or the pelvic organs led to the diagnosis of compression of the cauda equina caused by some neoplasm in the canalis sacralis. Dr. Rehn, having opened the sacral canal from the hiatus sacralis almost to the last lumbar vertebra, corroborated the diagnosis; for he found a soft tumor of the thickness of the little finger extending from the middle of the sacral bone into the vertebral canal; the tumor was extradural, not adherent to roots or to the dura mater, but it had exerted a strong pressure on the cauda equina and the dura. Weigert showed the tumor to be a lymph-angioma cavernosum. Status three months after the operation: The pains in the back have disappeared completely. The patient sleeps three or four hours in the night without an hypnotic. Occasionally there are slight pains in the left sciatic nerve. He walks for three or four hours without fatigue. No vesical or rectal trouble. The knee-jerks are easily elicited and are equal on both sides.

GYNÆCOLOGY.

GONORRHŒA IN THE FEMALE.

Bumm (*Centralblatt für Gynäkologie*, 1891, No. 22), from a long study of this subject concludes that gonorrhœa in women is a process limited to the superficial layer of the

mucosa ; the cocci invade the epithelial layer, but are always arrested when they reach the submucosa. The epithelium is originally cast off by reason of the active suppuration, but is quickly renewed, assuming the pavement form; after this change has occurred the active invasion of gonococci is usually arrested, but they continue to grow in the secretion, in which they may persist for months and years. The gonococci have no connection with septic processes; they do indeed cause suppuration of the mucosa, but are destroyed when they reach the subjacent connective tissue. If sepsis develops it must be in consequence of mixed infection; septic germs are frequently present in gonorrhœal pus, and a favorable nidus for the reception of external germs is offered by the purulent genital secretion. The urethra and cervical canal are the favorite seats of gonorrhœal infection ; acute gonorrhœa of the cervix gives rise to symptoms only at the outset, but after it has become chronic it may exist for years without causing disturbances, unless it extends to the corpus uteri and thence to the tubes.

The cocci possess no power of spontaneous movement and extend only short distances by proliferation. Extension over larger surfaces must be through the agency of the secretion. Normally the cervical secretion cannot pass the os internum, which also serves as a barrier to the entrance of the specific infection. Menstruation favors the admission of cocci into the uterine cavity, also certain mechanical causes, such as coitus, the introduction of sounds and intrauterine medication ; lastly, this is liable to occur during the puerperium. After they have reached the cavity they again remain stationary, and probably are only carried into the tubes from the causes already mentioned, the puerperium being the most favorable time, as the proximal openings of the tubes are then more patent. In fifty-three patients with gonorrhœa, who were kept under observation for at least five months after the initial symptoms developed, the cervix was infected in 75 per cent., the corpus uteri in 15 per cent., and the tubes in only 3.5 per cent.

PRIMARY CANCER OF THE CLITORIS.

Dr. F. J. Merkle (*Centralbl. f. Gynak.*, October 3rd, 1891) observed this disease in a woman, aged 61. At the site of the clitoris was a tumor of about the size of an apple, already beginning to break down. There was an indurated gland as big as a walnut in the left groin. The tumor of the clitoris was removed by means of the thermocautery. The patient died seventy-three days after the growth was removed. At the necropsy epithelioma of the clitoris, with metastatic deposits in the lymphatic glands, was discovered. Dr. Merkle believes that the clitoris was most probably the seat of the primary disease in this case.

REMOVAL OF OVARIES FOR EPILEPSY.

F. Howitz and Leopold Meyer (*Gynäk. of Obstetr. Meddel.*, vol. viii, parts three and and four, 1891) describe four cases. The results are, on their own admission, discouraging. The cases were under observation for from two and three-quarters to four years. In all the ovaries were more or less diseased. In one case only was the patient cured. The fits increased during pregnancy. In the second the same symptom was observed, but after the operation the patient's condition was but slightly improved. In the third and fourth no improvement followed lactation, yet in the third the epileptic fits had always increased in number and severity during catamenial periods, and from thirteen months after the operation no show ever appeared. In the fourth the fits had ceased for four years, and recurred when the patient was suckling. All the four patients had been subject to fits for over seven years, the first or successful case having been epileptic for thirteen years at the least. In three out of the four complete amenorrhœa followed the operation. In the third there was a typical irregular hæmorrhage from the sixth to the thirteenth month after the oöphorectomy.—*Brit. Med. Jour.*

OBSTETRICS.

LABOR IMPEDED BY PARASITIC FŒTUS.

Dr. Westerschulte (*Nouvelles Archives d' Obstét et de Gynéc.*, August 25th, 1891) was called in to a labor case by a midwife, who could not deliver the child though its head was already born. He found that the child was half born, its trunk being exposed as far as the umbilicus. He relaxed the cord and then attempted to extract the child, which was still living and had passed the seventh month of intrauterine life. Though he used much force the trunk remained fixed, and he began to suspect twin pregnancy with adhesion of the twins. He placed the patient across the bed, and on careful exploration detected a soft mass

behind the breech, which felt like a second bag of waters. After firm traction for about a quarter of an hour the child was suddenly delivered. It made a few feeble respiratory efforts, but could not be kept alive. A big cystic body hung down from the child's breech; it was double the size of the head, and contained a placenta-like structure and a piece of cartilage an inch and a half long. The child was a well-formed male; there was no anus, the rectum opening into the cyst, which clearly represented a parasitic fœtus. —*Brit. Med. Jour.*

THE TREATMENT OF POST-PARTUM HÆMORRHAGE BY MEANS OF THE DUHRSSEN UTERINE TAMPON.

In the *Therap. Monatshefte* Dr. Everke writes that post-partum hæmorrhages are either due to lacerations of the vaginal mucous membrane and cervix, or else they arise from the uterine cavity when this organ does not contract firmly after expulsion of the fœtus (atonia uteri). The hæmorrhages of the first variety can always be controlled by sutures, but the cases of uterine atony in which no effect is produced by using ergotin, compression, or rubbing with the hand require other treatment. Dührssen's method of using the tampon is the surest, simplest, least dangerous, and most readily carried out of all the methods. The technique is as follows; The hair about the pubes is to be carefully scrubbed with soap and water, the vagina washed out with a thirty-per-cent solution of carbolic acid or a sublimate solution of one to one thousand. For tamponing we employ from three to six metres of ten-per-cent iodoform gauze, eight centimetres wide. The left hand grasps the uterus and presses it downward; then (when no speculum is employed) the gauze is pushed up through the cervical canal with the right hand (employing two fingers) to the fundus. In a short time we feel a board-like contraction and the hæmorrhage ceases. The tampon is removed at the end of twenty-four hours. The author explains the action of the tampon in this way: that the raw material produces an irritation of the uterine muscle, the contracting organ presses its walls firmly against the tampon, the lumen of the vessels becomes closed, and the hæmorrhage ceases. (It is consequently not advisables to tampon the uterus too firmly). The tampon may also be employed in cases of puerperal hæmorrhage and in slight lacerations.

MORRENIA BRACHYSTEPHANA—A NEW GALACTAGOGUE.

Senhor Pedro N. Arata describes (*Revista Farmaceutica*, Buenos Ayres, No. 5, 1891) the chemistry and properties of the above plant, which is a member of the *Asclepiadaceæ* growing in the Argentine Republic and other parts of America. An infusion of the roots has long enjoyed a local reputation as a galactagogue, and the author has endeavored to determine the active principles to which such action may be due. For this purpose he made the following examination: (1) Extraction with ether: Nothing but a small quantity of chlorophyl, fatty acids, and resin could be obtained by prolonged maceration of the powdered root with this solvent. (2) Extraction of residue by alcohol: An alcoholic extract of the remaining root was made. Of this a portion (resin) was insoluble in water, the remainder forming a red solution, which contained malate of calcium, chlorides of potassium and sodium, and a substance giving alkaloidal reactions with the ordinary tests. No volatile alkaloids were found, the only other noteworthy substances separated being starch, albumen, and gum. By the Stas-Dragendorf method the alkaloid could be obtained as a dark reddish mass, of pleasant odor and very bitter taste, soluble in chloroform, water, and amylic alcohol. An accurate analysis of this substance could not be made owing to the small quantity available. (3) Active principles of the fruit juice: From the expressed juice of the fruit there could be obtained small quantities of the same alkaloid together with a glucoside. This latter substance is probably closely allied, though not identical, with a glucoside isolated by List from *Asclepias cyriaca*. The author does not appear to have yet worked out the physiological action of either of these substances, but, from an experience with a fresh infusion of the root, he is inclined to believe that the plant has valuable galactagogue properties.—*Brit. Med. Jour.*

PÆDIATRICS.

IODOFORM VAPOR IN WHOOPING-COUGH.

At a meeting of the Société Médicale des Hopitaux on July 17th (*Rev. Gén. de Clin. et de Thér.*, July 22d, 1891), M. Chantemesse read, in the name of Dr. Chibret, of Clermont-Ferrand, a communication on the

effect of iodoform vapor in the treatment of whooping-cough. The method consists in sprinkling the room in which the patients live with iodoform. Under this treatment, children presented a marked diminution in the frequency of the paroxysms, and the duration of the disease was shortened. No symptoms of poisoning were observed.—*Brit. Med. Jour.*

TREATMENT OF DIPHTHERITIC AND DIPHTHEROID CONJUNCTIVITIS.

Abadi (*Rev. Mens. des Mal. de l'Enf.*, August, 1891) writes that in the literature concerning the treatment of ophthalmia there is nothing precise which is to be found. Some advise the use of nitrate of silver, others warm, and others iced compresses. Others still recommend a great variety of antiseptic solutions. In most cases the eyes have been lost, cures being exceptional. Since Fieuzal and Coppez recommended the use of lemon-juice for this disease, the author has frequently made use of it, and always with satisfactory results. It was used fearlessly, for it was believed to be harmless to the cornea. During the three or four days in which the disease is most threatening it must be used every five hours, night and day. Subsequently the intervals can be lengthened to eight, then to twelve hours, and then it can be discontinued altogether. This treatment is useful not only in pure diphtheritic forms of the disease, but also in the diphtheroid forms. It is believed that nitrate of silver is very injurious in the treatment of this disease.

CLINICAL AND BACTERIOLOGICAL STUDY OF SCARLATINOUS ANGINA.

In a careful and conscientious thesis, Dr. Bourges divides the angina of scarlet fever into the erythematous variety, which may or may not be accompanied by a pultaceous deposit, the pseudo-membranous and the gangrenous forms. The pseudo-membranous may be subdivided into precocious or tardy, the first of which is often benign, does not extend, and produces little or no effect upon the general condition. Late pseudo-membranous angina, on the contrary, would seem to be most often of diphtheritic character, although the occurrence of very benign examples leaves this point doubtful, and a decision can only be reached by bacteriological investigations. The gangrenous form is the most severe, and is accompanied by special characteristics.

His experiments with the inoculation of streptococci found in scarlatinous angina have led him to conclude that "the anginas of scarlatina are due to a secondary infection by pyogenetic streptococci in the erythematous angina, in most cases of precocious pseudo-membranous angina, and in certain cases of tardy pseudo-membranous angina." The streptococci found in the suppurations which so often complicate scarlatina generally enter the system through the tonsils, which are infected from the beginning of the disease.—*Revue de Laryngologie*, etc., Aug. 1st, 1891.

HYGIENE.

SANITARY TRIUMPHS.

In an interesting article in the June issue of the American Statisical Association's quarterly publication, we find some significant facts regarding the advantages of sanitary legislation experienced in England within the past sixteen years. In the year 1875 a general law was passed in England for the protection of the public health, known as the Public Health Act, and from that time the death rate in England has decreased for all diseases which owe their origin and growth to defective drainage and impure water supply. Typhoid fever is such a disease, and the diminution of 57 per cent. in the death rate from this malady is undoubtedly the greatest triumph for sanitary reformers. During the ten years from 1866 to 1865 the annual mortality was 22.19 per thousand inhabitants; and from 1838, the first year of careful registration, to 1865, the average annual rate was about 22.35 per thousand. But for the ten years of the period 1880 to 1889 the average falls to 19.08. It seems justifiable to ascribe this diminution in the death rate to the operation of the Public Health Act, and the execution of duties such as drainage, inspection of water-supplies, vaccination, and others which are becoming better understood. Mr. Farr, in his *Vital Statistics*, estimates the value of human life in England to be about $770 a head; that is, the value inherent in the people as a productive money-earning race. If we suppose, which is allowable if other things remain the same, that this diminution of the death rate during this last decade was due to the measures taken to that end, we find that the number of lives saved, representing a total for the decade of 856,804 persons, according to Mr. Farr's estimate

represents a social capital of $650,000,000. Thus in ten years the country has more than regained the sum that was spent in sanitary improvements in the fifteen years, and in this calculation nothing figures for spared grief, better health and happier life. This diminution of mortality is not observed in in all forms of disease. The mortality from zymotic diseases, from 1861 to 1870, was 42.54 per 10,000 living and this was reduced to 24.52 in the period from 1880 to 1889, but measles, diphtheria, whooping-cough appear to have escaped the influence of sanitary measures. Consumption has equally diminished in England in these last years. The mortality from this cause in the years 1861 to 1870 was 24.89 per 10,000 living. For the period 1880 to 1889, it fell to 17.36. The statistics further demonstrate that sanitary measures affect the death rate of young persons between the ages of one and twenty-five years, and especially between ten and twenty years. The gain in this latter decade, which amounts to 28 per cent., is economically a great gain. The death rate for old persons has increased during the last decade, a fact which may be chargeable to the bustle of the nineteenth century, the wear and tear upon the nervous system, while the effect of sanitary improvement is most noticeable in the abatement of infant mortality.—*Amer. Analyst.*

THE INFLUENCE OF WEATHER ON DISEASE.

We may regard it as certain that an apparent connection between infectious diseases and atmospheric conditions had suggested itself to the medical mind long before Sydenham attributed to the atmosphere an "epidemic constitution." The influence of weather would be measured by its effect in providing an environment suitable to germ development. Thus moist weather, whether bleak or warm, would be found conducive to the spread of contagia, and so it is. This fact has often been attested by the extension of cholera, diarrhœa, and the exanthemata. A warm and dry day, on the contrary, tends to check morbid action of an infectious kind. This fact is susceptible of more than one explanation. We may, on the one hand, regard it as a consequence of the absence of that germ fortering condition—humidity; on the other, we cannot fail to be reminded that dry warmth and sunshine give the signal for an exodus from many crowded homes, for their freer ventilation, and consequently for diminution in the intensity of contagia. The exact value of weather changes in regard to this class of diseases, however, still is and must for some time remain *sub judice.* As for the ailments more usually associated with these changes—those for example, more commonly known as inflammatory—the connection is here much more evident, and also in all likelihood more direct. The association of pneumonia, bronchitis, asthma, and rheumatism with bleak and wet weather is too invariable to permit of our doubting its reality apart from any suggestion of septic agency.—*Lancet.*

MEDICAL CHEMISTRY.

LINAMARIN.

MM. Jorissen and Hairs (*Journ. de Phar. d'Anvers*) have obtained from Linum usitatissimum a nitrogenous glucoside, which differs from amygdalin and laurocerasin, and is the source of the hydrocyanic acid which that plant disengages abundantly under certain conditions. Linamarin occurs in the form of colorless and odorless needles, having a very cooling and bitter taste. Is soluble in its weight of water, also in alcohol, but almost insoluble in ether. It is distinguished from amygdalin by several physical and chemical characteristics, which are summed up in the following comparative tables:

AMYGDALIN.	LINAMARIN.
Little soluble in cold water, (1 part in 12).	Very soluble in cold water, (equal parts).
Parts with its water at 120° C. melts and decomposes at 200.	Retains its water at 120° C., melts at 134°, and bears a heat of 150° without decomposing.
Colored purple by strong sulphuric acid.	Not colored by strong sulphuric acid.
Contains 52.51 per cent. of carbon, and 3.06 per cent. of nitrogen.	Contains 47.88 per cent. of carbon, and 5.55 per cent. of nitrogen.
Is reducible by adding an emulsion either of almond oil or of linseed oil.	Reducible by adding a linseed emulsion, but not by one of almond oil.
Benzaldehyde present in reduction products.	No benzaldehyde in reduction products.

ON THE PRESERVATION OF LUNAR CAUSTIC.

M. Bartle, pharmacist of the Vincennes Military Hospital, after an exhaustive study of the matter, concludes that coriander seed, linseed, etc., usually used in the preservation of lunar caustic are more or less deleterious, and recommends in their place powdered or

shredded asbestos that has previously burned, or thoroughly dried, well-dried sand, or, by preference, granulated pumice stone. To obtain the latter it is only necessary to beat the commercial pumice stone in a mortar, and to sift it through a brass sifter in such manner as to get the grains about the size of shot used for bottle cleaning. The fine dust is gotten rid of by sifting in the usual way.

Clippings and News Items.

THE ASSOCIATION OF MILITARY SURGEONS OF THE NATIONAL GUARD OF THE UNITED STATES.

The second annual session of the Association of Military Surgeons of the National Guard of the United States will be held at St. Louis, April 19th, 20th and 21st, 1892. An interesting programme of addresses by prominent surgeons of the National Guard and the United States Army has been arranged, and a goodly number of scientific papers on Military and Accidental Surgery will be read and discussed, and all matters pertaining to the health, usefulness and welfare of the civilian soldiers will receive attention.

COCAINE IN NERVOUS ASTHMA.

Prof. Da Costa recently treated with marked success a case of pure nervous asthma with one-fourth grain of cocaine per diem. After obtaining the desired result the remedy was given only twice afterward, and but once a day.

SALICYLIC ACID AS A DIURETIC.

After a series of investigations on this subject, Huber concludes that salicylic acid is one of the safest and most important diuretics. The greatest increase in the amount of urine seems to occur in rheumatic fever and serious pleurisy, whether the temperature is raised or not. In all cases the total loss of water by the skin and urine was increased, and the solids of the urine were increased. In ordinary pleurisy, and in four cases of cardiac dropsy the drug acted well.

SODIUM SALICYLATE IN RENAL COLIC.

M. Fay, in the *Wiener Med. Blatter*, praises the beneficent action of sodium salicylate in the treatment of nephritic colic. He declares that under its influence the calculi are rapidly eliminated and the patients restored to health. If *true*, this is indeed a boon to suffering humanity, as few tortures are so acute as those of renal colic, and none have hitherto been more rebellious to treatment. Sodium salicylate has also been highly recommended in hepatic colic.

LA GRIPPE.

The "grip"
When you get it
You'll fret it
As it wears you
As it tears you
You'll abuse
While you lose
Your grip;
Not the same,
'Cept in name,
As that other diabolic, pathogenic and prodromic, mucous quirking, top-knot wracking, jointlets cracking, stomach-working, body-burning, brainpan murking, nerves all churning affliction which is called—
Or by æsthetic people bawled
The "influenza" but, for short
When with cold in head you snort
And your temper's on the snip
It's just ordinary "grip."
And its metabolic
Worse than colic
Poison's in your blood
And you wish your name was mud.
Until in sullen fury you let everything just rip—
While in doleful chorus groaning
Your family are moaning
In a sort of runic rhyme
With their vitiated chyme
The solo of the grip.
Not the pip
But the grip, grip, grip
From its talons you can't slip
But must sit and in your person
(For all its woes a curse on)
Exemplify its rule;
And every one's a fool
When the whisky bottle's drip
And the quinine mixed you sip
And pay out pelf
To rid yourself
Of that all-effecting
Naught-delecting
Old world rip,
The grip.

—*Phila. Press.*

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Clinical Lecture.

THE TREATMENT OF TYPHOID FEVER IN CHILDREN.*

BY JULES SIMON, M. D.

PARIS, FRANCE.

Gentlemen :—By a mere coincidence there have just been admitted to our wards, four children suffering from typhoid fever, and I will take the opportunity to study with you the treatment of this disease in children.

Our little patients present different types of the affection. I will here state that the treatment varies somewhat according to the forms of the malady, and that certain typhical conditions require especial management. I will refer to this point later, perhaps at the conclusion of the lecture. In the meantime, I will remark that the treatment of typhoid fever, in my opinion, is subject to certain rules, rules which I will present to you in a synthetical form. In the first place we will examine the forms of the disease in our patients, and then direct our attention to the line of treatment which we shall pursue in each one of them.

The first patient is a boy, 13 years of age, who entered the Hospital on the 15th day of the disease. Up to this time the disorder had followed a regular course, and the patient exhibited a marked eruption of rose-colored spots. According to certain authors these rose-colored spots appear on children with the same regularity as they do in adults, and that the eruption exhibits the same confluent form. Up to the 20th day everything went on regularly with our patient, but at this time there occurred a sudden change; the temperature was considerably lowered, and there appeared what may be called a true urinary crisis, the increased amount of urine being 1500 grammes in twenty-fours hours. In fact, the patient had entered into a condition of convalescence. On the following morning, however, that is on the 21st day of the disease, there came, entirely unforseen, an abundant intestinal hæmorrhage. Intestinal hæmorrhage in typhoid fever in children is of rare occurrence, it being due, I believe, to the fact that in these patients Peyer's patches are not generally hard, infiltrated with lymphatic elements, and that there are no sloughs produced which on being detached give rise to hæmorrhage. In children Peyer's patches are simply exulcerated. Although rare, as I have remarked, intestinal hæmorrhage may appear under two distinct conditions and offer a quite different diagnosis. In certain instances, as in this case, the hæmorrhage is unaccompanied by serious symptoms. The general condition of the child remains good, the frequency of the pulse is comparatively unimportant, and there is no marked elevation of the bodily temperature. Hæmorrhage constitutes, therefore, in these cases, a peculiar kind of crisis. I have seen many examples of this critical hæmorrhagic condition, but I can positively state that I have never observed any serious symptoms develop. On the other hand, when the hæmorrhage is threatening in an individual in whom the temperature is high, the pulse frequent, and in whom there is a general adynamic condition of the system, then hæmorrhage is extremely serious and is generally followed by death. In these cases the hæmorrhage is due to marked alteration of the blood, and may always be considered as a phenomenon of approaching dissolution.

In our patient the hæmorrhage occurred under the most favorable circumstances, and I, therefore, adopted the following treatment: Ice upon the abdomen; two enemata each containing four to five drops of laudanum, to be injected in the twenty-four hours; cooling lemonade drinks; a mixture containing 1 gramme of the tincture of the perchloride of iron. I also advised absolute rest and a diet of cold broths. As I had reason to expect, the results have been most

*Delivered at "Hospital des Enfants-Malades," Paris.

excellent. The convalescence of our young patient has been steady, and to-day (the 28th of the disease) he is doing as well as could be desired. The hæmorrhage stopped three days ago, and he has commenced to partake more or less of a nourishing alimentation. He will be advised to continue the perchloride of iron during the period of convalescence.

The point I wish to impress regarding this particular case is, that the occurrence of hæmorrhage should not be a cause of despair. If the general symptoms are favorable, you must not fear to push the treatment I have indicated, with a right to expect and obtain a happy issue.

The second patient to whom I wish to call your attention, exhibits a type of abortive typhoid fever, in which the symptoms ceased about the 15th day, notwithstanding that the disease is apparently ready to avert or produce at the same time serious troubles. The patient is nine years of age, and entered our service on the 18th day of the disease, with all the typical phenomena of a mild typhoid fever. In this, as in the majority of children, no prodromic symptoms were observed, notwithstanding that the period never fails to appear. This prodromic period, which we have never noticed in this Hospital, will be most frequently met with in your civil practice. In children, it is true, this period of typhoid fever presented phenomena characterized by symptoms of a generally mild nature. The patients show a peevish disposition, suffer from irregular attacks of headache, perhaps one or two during the day. There may be a slight reaction, of a short duration; and, finally, with the appearance of a capricious appetite, there may come on a change in the usual character of the patient. You must be careful, however, in studying the different signs in order to avoid errors; for while you may be assuring the parents of the child of the commencement of a typhoid fever, you may be really dealing with a simple catarrhal affection. Again, you may attribute the symptomatology to an approaching attack of abortive typhoid fever, especially if the general aspect of the patient is not in accord with the rest of the symptoms, particularly with the elevation of temperature. If the general condition of the child is good, and there is an increased bodily heat, the probability is that you are contending with an abortive form of the malady. Apropos of this, I will state that in children the temperature rises easily, sometimes going up as high as 40°C., under the influence of the slighest emotion. It behooves us, therefore, not to suspect the existence of typhoid fever simply on account of the high temperature. You have seen, it is true, in our patient an evening temperature of 40°C., appearing constantly for seven consecutive days, and, nevertheless, convalescence has been established; but at the same time, the pulse, which had been exceedingly frequent, has fallen to 90 *pari passu* with the disappearance of the other symptoms.

Our third patient shows another type of typhoid fever. Not only the usual symptoms have been developed in this case, but, besides, other symptoms of an ataxo-adynamic character have been manifest. In the presence of these nervous symptoms I have thought best to treat the case by the hydrotherapic method. The result of this treatment has been most favorable. At this time I have no longer insisted on the application of baths, although I have always formulated this treatment in general. The child is to-day in a good condition, and convalescence has been completely established.

Our fourth and last patient to-day, is a typical case of typhoid fever, without complications or any anomalous character. In cases like this I advise a general treatment of which I desire to speak to you, a treatment that I invariably employ in regular, uncomplicated cases of typhoid fever in children.

In the first place hygiene must be attended to. As soon as the correct diagnosis is made I order the patient to remove to a new habitation, and a change of bed clothing morning and night. At the same time I order bathing, evening and morning, of the whole body, with aromatized water (thymol or cologne) at a temperature of 30° C. If the bodily temperature is elevated, say to 40° C., I order this bathing to be applied with even more frequency if the heat of the body should show a tendency to increase. This bathing is to be made by means of a sponge, and rapidly, first over the anterior and then over the posterior part of the body, after which the patient should be rapidly wrapped up in order to obtain a slight reaction.

This sponge bathing, I repeat, I am in the habit of employing in every case, and I especially recommend it to be applied frequently in cases of high temperature, and only when there are manifest no serious phenomena of a nervous character. On the contrary, when symptoms of an ataxo-adynamic nature accompany the elevation of

the temperature, then I have recourse to the application of general cold, or better warm baths.

I will not to-day study from a general point of view the question of the employment of cold baths in the treatment of typhoid fever, nor especially how such a measure acts in the case of adults. I will confine my remarks to the consideration of my method of treatment in the case of children and of the results that I have obtained. If, for instance, I observe in a child, at the same time, a high bodily temperature and ataxo-adynamic phenomena, I prescribe from the beginning baths at a temperature of 35° C., of a quarter of an hour duration, progressively diminishing the temperature of the baths to 25° C. The baths are renewed every three hours, but this rule is not absolute, and generally our guide should be the march of the disease, particularly in regard to the amount of fever. The baths then, should be renewed according to the degree of the hyperthermic condition of the patient. This practice which, I assure you, has nothing of a dogmatic character, has given me good results, and you have observed a good example in the case of our third patient. Therefore, to conclude, in children you should always advise the application of cold baths in those cases especially that exhibit ataxo-adynamic symptoms, but abstain from ordering them when there is only a condition of hyperthermia. I will repeat, that a high temperature by itself is of no consequence in the case of children. To this therapeutic measure (generally applied in all cases), you will add an enema, night and morning; if the stools are offensive you will order an injection of borated water slightly aromatized. For drinks, lemonades or some mixture with syrup of orange should be given. The diet should consist, during the febrile period, of broths. You have not heard me speak of milk. The reason is that, according to my experience, milk is not an entirely proper article of food in the typhoid fever of children. With few exceptional cases, milk is badly digested and its administration is followed by a slight exacerbation of fever. Therefore, I prefer to give it during the period of convalescence. In advanced stages of the disease, I prescribe claret, rum, brandy or Malaga.

Such is the hygienic treatment which I apply to typhoid children; but the medicinal treatment is as equally important. If the young patient is laboring under a state of agitation, I prescribe the following mixture:

℞

Hydrate of chloral	gramme 0.50.
Tincture of musk	gtt. xx.
Linden-tree water	grammes lxxx.
Syrup of orange flowers	grammes xx.

This to be administered in dessertspoonful doses in the course of 24 hours.

I prefer chloral to the bromide of potassium on account of the digestive disturbances which the latter remedy is apt to produce. If the child complains of headache, I give small doses of the syrup of codeine; but bear in mind that this is the only opiated preparation which is to be employed in infantile typhoid fever. The extract of quinquina which is frequently used in the enteric fever of adults, ought not to be administered to children. In fact, I will state that the extract produces disorders of digestion and provokes a loss of appetite, especially for those articles of food most advantageous to these young patients.

At the beginning of the 15th day of the disease, I prescribe the perchloride of iron in the following manner: At first, 1 drop every two hours, afterwards double the dose for about two or three days. This remedy can be given in a little water, sweetened or not, after the first mouthfuls of broth. Once taken, the child is allowed to finish his cup of broth. The perchloride of iron is a very valuable remedy in the treatment of infantile typhoid fever. It has given me, in a large number of cases, very good results. The medicament acts not only as a tonic, but it also appears to aid digestion, and thus, it is entitled to its continued administration during the period of convalescence. I insist upon the use of the perchloride of iron, and you will do well in prescribing it also.

I have said nothing so far in regard to the use of quinine. I have purposely left for the last my remarks about this drug. In all cases of infantile typhoid fever you must administer, from the very beginning, the sulphate, and you must continue it during the whole period of the disorder. You will cease its ingestion only when defervesence has been completely established. The doses of the drug will vary according to the age of the patient and the physiological effects produced.—Translated from *Le Bulletin Medical*, Nov. 15th, 1891.

In consequence of the remarkable success claimed in the treatment of drunkenness with hypodermic injections of strychnine, this method of treatment was tried in the city hospital in Görlitz, Silesio, but the results were almost entirely negative.

CHRONIC PELVIC PERITONITIS—LACERATION OF CERVIX WITH RETROVERSION AND PARTIAL PROLAPSE.

BY M. D. MANN, M. D.,

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Gentlemen:—This woman has come to get an opinion. She is twenty-four, has been married six years, has had no children. She was first unwell when sixteen. She has menstruated at intervals sometimes of four weeks, sometimes of three, sometimes she flows a good deal, sometimes very little. Since she has been married there has been more flowing. It was not painful when it first began but it has been so since marriage. She first began to feel ill five years ago. She had the ague and then scarlet fever during the first year of her married life and she had never quite recovered her strength. She complains of pain in her side. She says she has had a kind of paralytic stroke affecting the left side and even now her left arm is not as strong as it was. The same condition obtains in the left leg and foot. The stroke came on suddenly while she was walking. She did not become unconscious but she could not talk for three or four days. She was almost totally incapacitated for a week or two and for four or five months she was quite weak in the side and could do very little work.

The pain of which she now complains, begins in the left ovarian region and runs through to her back. It is worse when she is unwell and especially just at the conclusion of menstruation. Her period lasts sometimes three or four days, sometimes two weeks. She does no work except about her house, and even that tires her a great deal, and she has to lie down frequently during the day. Her bowels are regular except that sometimes she has to use an injection. The movements are sometimes quite painful.

You hear the history of this case and it is sufficiently common and characteristic. Here is a woman who is in comparatively good health until she gets married. Then she has a sickness in her first year of married life from which she recovers slowly, following this she has what she calls a stroke of paralysis from which she recovers but gradually and partially. About a year ago her health again began to fail. She complains of pain in the ovarian region, backache and general inability to work. What can we say as to the diagnosis of such a case? It might be almost anything. We cannot make a diagnosis although we might imagine what the condition is. Just before I brought her into clinic, I made an examination and I found that on the left side of the pelvis behind the broad ligament, there was a mass of something which did not belong there. I could feel this through the vagina and by examining through the rectum I could feel it very distinctly. Pressure over this mass from the inside caused a great deal of pain and when I made bi-manual palpation she evidently was hurt considerably. There could be but one thing, with this history and with what I find by physical examination to account for her trouble, and that is some pelvic inflammation. It is a little difficult to trace the history of it and to know exactly when it began but probably there was a specific origin for it since the trouble increased greatly soon after marriage and she never has been regular in her menstruation since marriage, and since then she has flowed a good deal more. Probably there was an old gleet existing in the husband at the time of marriage or perhaps a more recent urethritis. It is impossible to tell at this late date just how the trouble originated. However that may be, she has been a great deal worse since the attack a year ago. The pain and suffering referred to the left side has made her a miserable invalid since then. What is the significance of the pelvic mass which I have felt in my examination? It does not mean a pelvic cellulitis, as we used to think, but a pelvic peritonitis having its origin in the Fallopian tube. I cannot tell you its exact cause, but I can tell you its nature. The Fallopian tube is inflamed, prolapsed, knitted together with the ovary into a mass by adhesions and bound to the broad ligament behind. On the other side we can feel little or nothing, and there is no tenderness. At the same time, there may be a less degree of trouble there. The pelvic peritonitis is very apt to be worse on one side than on the other. It is very rare to find one side diseased and the other entirely healthy.

The important question is, what we can do for the patient. She is poor and her husband depends upon her to manage the house. It is exceedingly necessary for her and him that she should have her health and be able to work. It is a question almost between the poor-house and health. What can we

do to help this woman? These cases of pelvic inflammation are very difficult to handle. There is not, in all probability, a pus tube in this instance. The mass that I feel is quite small, very hard, it is not low down in the pelvis and does not give the impression of a large distended tube but of a thickening of tissues and agglutination to other parts by peritonitis. At the same time it causes a great deal of local and reflex pain. There is also intercostal neuralgia which goes so commonly with these troubles, although women often think that the pain is due to heart disease. There is a very close nervous connection between the left ovary and the intercostal nerves, as was pointed out by Fothergill a number of years ago; there is a direct channel for reflex disturbances.

This woman has had a certain amount of treatment but it has done her little good. She has been treated at the Dispensary a year with local applications, douches, iodine, tampons, etc. When she first came she could scarcely walk and for a few months she was benefited, but of late she has made no progress. She probably will not improve further on such treatment. I do not know anything further to do, unless it be to try electricity or perform laparotomy. I have not been satisfied with the use of galvanism in the treatment of these cases. It may be because I do not know how to use it, or it may be because it does not do any good. I have tried it myself and I have seen it tried by those who claim to be experts in its use and without improvement on the part of the patient. A long course of "rest cure" might do this woman some good, but it is absolutely beyond her means. I do not see anything left except a laparotomy and I should expect that by the removal of these diseased organs the patient would be allowed to regain her health. The function of the organs is, of course, destroyed so that the tube could not carry an ovum, but the ovary probably cannot even give off an ovum. The woman would much rather have her health than the exceedingly remote possibility of bearing children. I shall suggest to her an operation, telling her frankly that I do not know anything else that will cure her. The risk of laparotomy is comparatively slight and the chances of good results very great.

Pyoktanin, though no better, perhaps, than corrosive chloride or some other articles to prevent wounds becoming septic, is, however, much better to disinfect a wound which has become septic or infected.

Communications.

THE IMPORTANCE OF BLOOD CLOT IN TREATING DEAD SPACES.*

BY MONT. LINVILLE, M. D.,
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Since the days of Ambrose Paré the progress of surgery has been steadily onward and upward. History is full of illustrious names; but in the years to come the name of Lister will stand out more prominent than all others. In teaching us the importance of cleanliness and the use of antiseptics and the drainage tube, he has not only conferred the greatest boon on suffering humanity, but gave medical men of the present day an impetus to learn how to assist nature in healing wounds without interfering with her laws.

In olden times the blood was considered the plastic material which filled the holes like the glue and cement which stick together the edges of a wound, but now we fear the most dangerous results from its decomposition, and use our best efforts to keep a wound free from it, and the surgeon who fails to check hæmorrhage will look in vain for successful results from his antiseptic technique. But when we change our views on any question, the pendulum of thought often swings too far in the opposite direction. May we not have fallen into the same error on this subject.

For more than twenty years the eyes of every thinking surgeon have been turned towards the great Lister, who has never lost an opportunity to emphasize wound drainage, and he is still untiring in his efforts to discover the best means for so doing. But during the last eight years other great minds have proposed methods for healing wounds without drainage tubes. Seven years ago Neuber contributed an interesting article on this subject. He recommended irrigation with a sterilized solution of salt, and drainage by loose stitching. To get rid of dead spaces he advised buried sutures inverted stitches, flap implantations and compression from without, but this plan is not only tedious, but often impossible to thoroughly obliterate the dead spaces in wounds.

I have worked until I was nearly exhausted in trying to carry out this plan of

*Read before the Association of the Surgeons of the Pennsylvania Railroad Company in Chicago, Oct. 20th, 1891.

treatment, but I do not believe that I ever thoroughly succeeded in obliterating the dead spaces. More than once in such cases I have been surprised and gratified to find that the wounds healed by the first intention just as regularly as the most simple wound without dead spaces.

Recently my mind has conceived the idea that there is something in Schede's theory of wounds healing under the moist blood scab.

He says, "It has required only a moderate experience with antiseptic surgery to enable us to recognize that even large blood clots in open wounds do not necessarily undergo destruction or decomposition, that they do not necessarily give rise to inflammation and accidental diseases, but that they take on changes which we may designate as organization of the blood clot, and which one may compare with the conversion of the thrombus in ligated blood vessels." This calls to my mind the words of the immortal John Hunter, which I first heard when a student from the lips of that grand old man Professor Gross: "In many deep-seated wounds where all the parts have remained in contact, those underneath will unite much better if the surface be allowed to scab. Compound fractures [more especially where the external wound is small] should be allowed to heal in the same way; for by preventing the blood to scab upon the wound either by itself or when soaked in lint, the parts underneath will unite, the blood under the scab becomes vacular, and the union will be complete even when the parts are not in contact. Many wounds ought to be allowed to scab in which this process is now prevented; and this arises, I believe, from the conceit of surgeons who think themselves possessed of powers superior to nature, and therefore have introduced the practice of making sores of all wounds."

Gentlemen, the author of these words was certainly far in advance of his time. I am aware that I stand on debatable ground, and that many may assail my position, but I only claim to be an humble learner, and if I can provoke a discussion on the few points which I may be able to hint at in this short paper, perhaps I may be able to absorb some practical knowledge that will pay me for my long journey to this meeting.

I honestly believe that the blood clot is the important factor in healing many wounds where we have dead spaces. And that too many surgeons do harm by trying to get rid of it, by the use of drainage tubes, and the application of strong antiseptic solutions.

Do not understand me to say that I am opposed to antiseptics or the use of drainage tubes. I believe that it is our first and most important duty, to thoroughly antisepticize our hands and the external portion of the wound, but we meet with many cases where the wound is deep, with large dead spaces, that I believe the use of carbolic acid or corrosive sublimate destroys the physical and, perhaps, the chemical characters of the blood, and produces a superficial necrosis which must retard healing. In operations upon diseased bones, where it is impossible to remove every particle of diseased bone or tissue, and where a profuse discharge is sure to follow, I am in favor of drainage, but in all wounds where the cavity is composed of healthy tissue, I believe that nature is superior to a drainage tube. In amputations if we cut our flaps short and neat, stitch the muscles and close the flaps by buried skin sutures there is no reason why we should not have rapid healing by first intention. I will very briefly relate the history of a few cases which I have treated during the last three years.

Case I.—Miss W., age 55, consulted me last September for carcinoma of right mammary gland; the tumor extended across the sternum and the axillary glands were involved. I found it necessary to remove the breast, pectoralis fascia, a large portion of the pectoralis major, the glands and adipose tissue in axilla, and skin fascia and muscles down to the sternum and ribs, three inches wide and five inches in length, this portion of the wound was without a covering, and presented a frightful appearance, I permitted the wound to fill with a blood clot, after which it was dressed antiseptically. I did not open it for a week, when I found the blood clot organized and a healthy scab covering the entire wound, which was completely healed in twenty-eight days. The patient has gained twenty pounds and thus far there is no sign of a return of the disease.

Let me digress for a moment, while I say that experience teaches me that the only hope of permanent cure in carcinoma of the mammary gland is not only to remove the entire gland but the axillary glands and a liberal portion of the surrounding tissue. Even the pectoralis major muscle nearly up to its insertion into the arm.

Case II.—Railroad brakeman injured while coupling cars. There was a compound comminuted fracture of the right arm, involving the elbow joint, which felt like a sack of small bones; the skin was broken

through in five places; there had been profuse hæmorrhage but was checked, or nearly so, by blood clots when I saw the patient. The arterial circulation being good I decided to make an effort to save the arm. I enlarged the wounds sufficient to remove lacerated pieces of muscles, and fragments of the humerus, olecranon and condyles of elbow joint. I then placed the arm in a solution of corrosive sublimate one to one thousand for several minutes; by this time the clots which had been broken up were reformed. No stitches were used, the arm after being dressed with iodoform gauze and loose bandage was placed on a straight splint. I redressed it in five days and found the blood clots red and healthy, and that they would bleed if gently touched with a probe. In four weeks the wounds were healed, and although the arm is weakened he has good motion in the joint.

Case III.—A German merchant, who was an excessive beer drinker, consulted me four years ago on account of a running sore on the anterior portion of right leg. I found that the anterior portion of tibia was diseased about three inches in length, also the soft parts for a much larger circumference. I removed every particle of diseased bone and tissue with a curette, and allowed the cavity to fill with a clot. I then applied the usual dressing, and on the fourth day found the clot was organized and healthy; this case gradually progressed to complete recovery. The cavity was filled so as to make the limb smooth and natural.

If time permitted I could relate several cases of compound fracture of the leg where there was not only loss of bone, but of the soft parts over the seat of the fracture, in which nature repaired the injury by organized blood-clot.

The dressing of this class of wounds is an important matter; gutta-percha tissue is an excellent protection, and enables the surgeon to avoid injuring or tearing away the scab during subsequent dressings. The old habit of dressing wounds every day or two, and each time tearing the wound open by so doing, was barbarous and I often wonder that nature did not rebell with such emphasis as more frequently to prevent recovery.

The less we disturb a wound the better; in all favorable cases of amputations one or two dressings should be sufficient. In the past much harm has been done, and many limbs and even lives have been sacrificed by tight bandaging. I am glad that this matter is being constantly agitated. We always know better, but it is so easy to overdo it that we constantly need to be reminded of the danger.

The buried suture in many cases is a great improvement. How often have we found the holes in the skin produced by the stitches full of matter, and the wound healed by first intention. The skin, no matter how thoroughly disinfected, may contain the germs for producing septic trouble, but the cavity of a wound if in a normal condition may be capable of disposing of large quantities of micro-organisms.

A frequent cause of suppuration in infected wounds is obstructed circulation, and nothing is so liable to cause it as tight ligatures and sutures. Experience teaches me that I have committed more than one sin against nature in this way during the early years of my practice. Methinks it a good plan to use weak silk, and if we occasionally break it we are reminded that we are using too much force.

I hint at these small matters, because they all belong to the one great family in wound treatment, and it will not do to neglect the most minute detail if we wish for reasonable success.

We may be successful in treating wounds with dead spaces, either by obliteration, drainage or blood clot, providing we thoroughly disinfect the skin and everything that touches the patient.

In conclusion let me say that while I do not recommend dispensing entirely with the drainage tube, there is a strong tendency in that direction among some of the bright surgeons of to-day. We love to boast that surgery is a true science, but we never should forget that nature is the great physician, and that the best we can do, is to assist her in the simplest manner possible.

The blood clot theory is not new. It is being tried here and there by progressive men who are loud in its praise. We live in the age of rapid thought, and the physician who loves the profession, and works for something more valuable than money, must be devoted to hard study and extensive reading.

The multiplicity of ideas requires him to have a clear brain and quick judgment if he wishes to stand somewhere near the front rank, and to be a blessing to suffering humanity. I am reminded of the lines often quoted by the August Nestor:

> "A wise physician our wounds to heal,
> Is more than armys to the public weal."

And again those quoted by Paulus from that grand old poet Homer:

"The man of medicine can in worth with many warriors vie,
Who knows the weapons to excise, and soothing salves apply."

A CASE OF THERMIC FEVER COMPLICATED BY CROUPOUS PNEUMONIA.

BY CHARLES B. WILLIAMS, M. D.,
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John P. L., age 27, white, a vigorous, healthy looking man, employed at Spreckles' sugar refinery, having been overcome by the heat was brought to the Pennsylvania Hospital by the police patrol on June 17, 1891, during the service of Dr. Morris J. Lewis. On admission at 2.35 P. M. his temperature per rectum was 110°; pulse 160; resp. 42. He was intensely cyanosed about the face only. The rest of his body was burning hot to the touch. His eyes were markedly congested—the pupils were contracted and the eyeballs were rolled upwards. He was in a state of profound unconsciousness.

His breathing was rapid, stertorous and labored and accompanied with a loud rattling in his throat. His bowels were moving involuntarily when he was brought in and moved continuously for 20 minutes after admission. He had had convulsions before admission but none after. His pulse was scarcely perceptible at the wrists. It could be counted at the carotids and by the stethoscope. There was a profuse, frothy, mucous discharge from his nostrils.

At 2.35 P. M. he was given an iced enema and an hypodermic of tr. digitalis ♏x with whiskey ♏xv. His bowels continued to move for some time after the iced enema had been given. At 2.55 P. M. his temperature had fallen to 103⅗°; pulse 160; resp. 52. He was given another hypodermic of digitalis and whiskey. At 3.10 P. M. his temp. and pulse were the same but his respirations were 40 per minute. He was now given an hypodermic of strychniæ sulph. gr. $\frac{1}{60}$. At 3.20 P. M. the first sign of reaction occurred. His temp. was 102⅖°; pulse. 136; resp. 32. It was now that the ice rubbing produced a marked redness over his body surface, and the spraying from the hose would cause him to writhe and twist about; for previous to this, while the ice and hose were being applied he had remained quite immovable. Between 3.20 and 3.35 P. M. the hose was again applied. His temp. at 3.35 P. M. was 102½°; pulse 124; resp. 34. The hose was now applied for the last time between 3.35 and 3.50 P. M. At 3.50 P. M. his temp. had fallen to 100⅗°; pulse 110; resp. 28. He was now thoroughly dried and placed upon another bed. At 4.05 P. M. his temperature was 99°; pulse 120; resp. 32. He seemed very restless and was writhing and twisting about the bed a great deal. He was accordingly given an hypodermic of morphiæ gr. ¼ et atropiæ gr. $\frac{1}{100}$. At 4.20 P. M. temp. was 98⅘°; pulse 132; resp. 32. At 5 P. M. his pulse still continued to be very rapid and feeble. Ordered another hypodermic of tr. digitalis ♏x and whiskey ♏xv. At 5.20 P. M. his temp. arose to 104°; pulse 120; resp. 32. Had another hypodermic of digitalis and whiskey. At 5.45 P. M. his pulse still remained unchanged. Ordered him hypodermics of whiskey every fifteen minutes until 8.30 P. M. From 6 P. M. until 8.30 P. M. he seemed very restless and twitchy and he was therefore given another hypodermic of morphiæ gr. $\frac{1}{8}$. During this time he also received two more hypodermics of tr. digitalis and whiskey. His pulse could now be distinctly felt at the radials.

As he still continued very restless, his wrists and ankles were strapped to the bed. When the patient was removed to the ward at 8.30 P. M. he was still in an unconscious condition. He was ordered to have an ice cap to his head and hypodermics of whiskey every half hour until 11 P. M. After which time he had them hourly with spts. ammon. aromat. f ʒss. by mouth. The patient slept through most of the night and awakened in the morning and desired to know where he was—how he had come to be in the Hospital and why the straps were on his wrists and ankles. Temperature was now 99⅘°; pulse 98; respiration 18. His pulse was rather feeble and although his general condition was remarkably improved yet he seemed rather dull and slept a good deal. His urine examination now showed a specific gravity of 1022—was clear, yellow, acid and contained albumen. Microscopical examination showed numerous hyaline and epithelial with pale granular casts.

On the following day, 19th, he seemed muddled and dull of comprehension and when asked a question he would reply in such a manner as almost to indicate that he had been having a little too much spiritus frumenti. His pulse was 84 and of fair volume, and respiration 28. His stimulus and digitalis were immediately discontinued and

he was given sodii brom. gr. xv. t. d. and also calomel gr. ½ et sodii bicarb. gr. v. q s. h. The following note was made on this day: There is no left knee-jerk and none on reinforcement. His feet have a curious mottled appearance. He has good power and grip in both hands. His face draws up more on the right side than on the left. His tongue comes out straight, but possibly it turns a trifle towards the left. There is no difence to be seen in the movement of his forehead. He can read understandingly, and speaks in a thick voice as if he had something in his mouth. Right pupil is a trifle larger than the left. Pupils react to light and accommodation. He has a slight elbow jerk. On June 21st he became delirious and continued so more or less until the end of the month. He had numerous delusions and hallucinations and could not be reasoned out of them. His temperature during this time ranged between 99°+ in the morning to 102–3 and 4+ in the evening. On the 27th he began coughing a good deal. His sputum was profuse, greenish, muco-purulent and tenacious. On July 1st physical examination of his chest showed that fremitus was most marked over his right chest anterior. Percussion note good and very resonant; expiration over right chest was rather prolonged with a few cooing rales. Posterior—right base, percussion note is flat, tubular breathing, ægophony and sub-crepitant rales. Three days later the following note was made: Percussion note is still flat over the right lung posterior, tubular breathing and sub-crepitant rales can be heard in the right spinal gutter. Of late his temperature has been keeping close to the normal in the day time with an evening rise to 103° or 104°. + His temperature usually begins to rise from 6 P. M. to 11 P. M., when it reaches the maximum 104°. Antikamnia in repeated doses of gr. jss and gr. iij seemed to have no effect in controlling this rise of temperature. The same could be said of antipyrin and quinine. The latter drug having been administered as high as gr. xxxvi. per diem. Urine examination made on July 10th, showed a specific gravity of 1018, was clear, yellow, slightly acid, albumen and casts negative, some triple phosphates.

In addition to the above drugs the patient was receiving ammon. carb. gr. v. every four hours besides milk punch t. d.

On July 18th the following note was made: Chest—There is good movement anterior and but slight impairment in resonance at the right apex. A few moist râles can be heard posterior on the right side and mostly at the root of the lung. He perspires profusely at night and especially after the small doses of antikamnia.

On the 16th of August his chest seemed to be perfectly clear, and his temperature has been keeping within the limits of 101⅘°. The attack of croupous pneumonia caused the patient to emaciate rapidly but after his chest began to clear up and his cough had ceased he soon commenced to regain his strength and weight.

On September 4th, his temperature reached normal and showed no inclination to rise after that time—his cough had ceased entirely and he seemed to be in perfect health. He was discharged cured, on September 19th, 1891.

The patient's temperature chart is a curiosity. It is 8 feet 2 inches in length and its record covers a period of three months with the exception of two days. In all of this time the patient's temperature never reached the normal to stay any length of time until a few days before his discharge, when it showed no inclination to rise again and he left the Hospital—a picture of health. At the present time the patient is doing well and he has no return of bad symptoms.

FRACTURES AND INJURIES OF THE SPINE IN THE CERVICAL REGION—FRACTURE OF THE THIRD VERTEBRA—CERVICAL SPINAL HÆMORRHAGE, FRACTURE OF ODONTOID, FRACTURE OF FOURTH VERTEBRA.*

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The following group of injuries to the spine, taken in connection with the cases of laminectomy reported by me in the *Transactions of the College of Physicians*, Philadelphia, January, 1890, and February, 1891, show that the prognosis in the majority of the cases of injury to the spine is determined almost entirely by the initial lesions—*i. e.*, the amount of injury which has been primarily inflicted upon the cord. In nearly all cases of spinal fracture the substance of the cord receives severe contusions or lacerations, and the resultant symptoms are not only dangerous, but it frequently happens that death ensues in a short time.

*Read before the Philadelphia County Medical Society, December 9th, 1891.

The first case shows that even very positive bone injury in the cervical region may produce symptoms of but moderate severity, provided the cord be uninjured.

Fracture of Third Cervical Vertebra.—E. R., male, aged thirteen years, fell through an elevator shaft some thirty feet. He was picked up unconscious and removed to the Hospital. Upon examination a large hæmatoma was discovered over the occiput, but there were no external evidences of injury. The head was retracted and turned markedly backward; it could be bent only slightly from side to side. Rotation was possible only to a slight degree. A finger passed into the mouth discovered a distinct prominence behind the posterior wall of the pharynx corresponding to the third cervical vertebra. The rigidity of the neck muscles was great. There was no paralysis, no cough, no loss of sensation, nor could crepitus be discovered. There was no evidences of severe pressure upon the cord. Flexion, extension, and rotation were almost impossible.

Under strong extension and counter-extension applied upward from the head and downward from the body the deformity was markedly reduced. A plaster-of-Paris collar applied while extension was maintained was accurately fitted, so as to keep the head in a fixed position. This bandage was arranged so as to press on the occiput as high as the prominence, also to press upon the mastoid and temporal bones, and to curve forward so as to encircle the lower jaw. It then accurately fitted the neck from whence it extended to the shoulders and passed down loosely to envelop the upper part of the thorax. This maintained the head accurately in position and prevented any movement of the upper portion of the trunk, neck, or head. This was applied in place of extension and counter-extension on account of the sensitive condition of the hæmatoma over the occiput. After the tenderness from the blood tumor had disappeared, weight and pulley extension were applied to the head and feet up to the point of comfortable endurance. The plaster envelopment was sawn open and permitted to remain as a splint to prevent lateral rotation and flexion.

He was kept in this position for six weeks. There was no impairment of motion or sensation during this time. The extension apparatus was then removed and an accurately fitted neck splint of plaster-of-Paris was applied. He wore this with comfort six weeks longer. At the end of this time examination of the pharynx showed that while there was still a slight prominence in the posterior part of his throat, the deformity was much less evident than at the time of the injury. There was still less rigidity, but no deviation of the vertebral column could be discovered. The absence of pressure-symptoms resulting from the injury was a point of special interest. A year later he could move his head in all directions, although motion of the chin to the right was limited. Flexion seemed perfect. It is but seldom that a patient either breaks or dislocates his neck without more serious symptoms.

Cervical Spinal Hœmorrhage.—W. M., aged eighteen years, was injured by diving eighteen feet into a pool of water two feet deep. He struck his head and the back of his head on the bottom of the pool. He was immediately pulled out by his comrades and was found to be unconscious. He remained in this state two hours. When first seen, some time after, he was blanched and pale, and complained of a pain in the back of his neck and beneath the shoulders. Sensibility was present throughout body and legs but apparently diminished. There was no opisthotonos, and no rigidity of the neck other than that motion gave slight pain. There was no tenderness over the region of the spinal cord, except slight pain in the lower cervical region. There was no visible displacement of the vertebræ, and no positive evidence of dislocation or of fracture. Flexion, extension, and rotation of the head were perfect and accompanied with only slight pain. The spinal column could be flexed and extended normally. Motion and extension in both arms, body, and legs seemed in good condition, except as regards sensibility as above noted.

He was partially conscious and could answer questions intelligibly, but with an apparent effort of the will, and his speech was slow. There was anæsthesia of both hands, especially on the ulnar side. He complained of pain in the region indicated. There was constant and decided priapism.

This condition continued until about seven hours after the accident, when he slowly seemed to lose power of the hands and forearms on both sides, commencing apparently in the region supplied by the ulnar nerve. Also there was progressive loss of sensation in both hands and forearms. Both brachial plexuses were sensitive to the touch, but not painful. Priaprism still continued, but the urine was voided naturally. The scrotum was anæsthetic and remained so for several days, and uncertain areas of the abdomen

seemed in the same condition, but his answers to questions were not very satisfactory. The legs retained both motion and sensation although both functions were apparently diminished.

The patient seemed to rouse from his unconsciousness at the end of the first hour and was moderately intelligent.

Up to this time extension made upon the spinal column by means of the head gave relief from pain, therefore, an extension and counter-extension apparatus was applied to the head and extremities, and continued traction was maintained.

Loss of motion and sensation increased during the next twenty-four hours until the patient was able only to move his arms feebly; fingers immovable. Sensation was entirely absent in both hands in the region supplied by the ulnar nerve. Sensation was impaired in other regions of the forearm and hands.

During the next two days there was apparently no change either as regards motion or sensation, but on the following day both functions began slowly to return.

At the end of the fifth day he could raise his arms, but only for a moment. When the extensor muscles were required to fulfill their functions the arm immediately fell. There was still a tendency to priapism, but the condition was not constant, the scrotum was still anæsthetic. Temperature, pulse, and respiration remained unaltered.

Continuous extension was maintained, and as there was no paralysis it was deemed probable that all hæmorrhage within the canal had ceased.

Motion and sensation returned to a slight degree in the thumb and fingers of the hand and in the arm, until gradually both functions were restored almost entirely. The scrotum remained anæsthetic for ten days.

Fifteen days later he could grasp an object with considerable firmness.

A trapeze was rigged over the bed so as to exercise the arms while extension was being maintained. An ischio-rectal abscess discharged for two weeks and then healed.

In eight weeks had thoroughly recovered and presented no abnormal symptoms. Motion and sensation complete.

A peculiar condition regarding this case was that after the condition of shock had passed away there was no serious symptoms until the probable occurrence of hæmorrhage had begun to make pressure upon the spinal cord and thus to interfere with its functions. The occurrence of paralysis upon both sides instead of upon one, and the length of time after the injury showed that the symptoms must have been largely due to gradual compression.

Fracture of the Odontoid Process of Axis with Dislocation of Atlas.—C., aged 18 years, fell 20 feet, striking upon his head. He was picked up stunned, but soon regained consciousness. He was able to walk to his home, several blocks distant, and to talk with his friends. An hour and a half later he was perfectly rational, talked freely and pleasantly, and complained of no pain when at rest; he simply desired to be permitted to sleep. He was quiet, but would suddenly start with an anxious look. The trunk and extremities were cold; pulse 85, feeble. Pupils equal, but failed to respond readily to light. The head was thrown backward with the occiput to the right, but he complained of no pain. The chin protruded, and the thyroid gland was prominent. Any movement or rotation of the head toward the right was accompanied with pain. Motion to the left was painless for a quarter of a circle, but any greater motion caused discomfort. There was no contusion or laceration of any part of the body; no depression of the skull, nor any evidences of fracture of the cranium. Pressure over the cervical region gave severe pain. The spinous processes of the cervical vertebræ were in line up to the third, but above this was a marked depression, while a little higher the position of the atlas was slightly projecting to the right of the median line. Manipulation caused so much pain that ocular examination of the pharynx could not be made. Digital examination revealed a slight prominence of the second vertebral body.

Diagnosis.—Dislocation of the axis from the atlas; probable fracture of odontoid.

During the night he slept at intervals, but roused at the slightest noise. There was no pain, except upon the movement of the head.

In the morning he took nourishment, and complained of no suffering. He ate a light breakfast, and was anxious to go to his business. Three hours later he began to grow drowsy, and in two hours became semi-unconscious, but could still be roused. He answered questions intelligently, but closed his eyes as soon as he had ceased speaking. The tongue was protruded straight from the mouth, and with difficulty; the pupils responded to light; the right eye was a little more responsive than the left. There was no paralysis, except of the bladder, the urine not having been passed since the acci-

dent. The catheter secured eight ounces of apparently normal urine. Pulse was 80, full; respiration 16, deep but not snoring.

Twenty hours after the injury the pulse was 48; respiration 12, somewhat stertorous, not puffy nor blowing. Could be roused only with effort. Answered unintelligibly; occasionally, however, an articular word escaped. He constantly pulled at the bedclothes. The urine dribbled. Pupils were nearly the same size, but the left responded more readily to the light. At the junction of the forehead with the hair, for an inch and a half to the left of the media line, apparently the point where the head came in contact with the ground in the fall, the scalp was œdematous and there was a slight depression. Pressure upon several points in the same region gave similar pitting. No evidence of fracture.

No injury could be discovered in any portion of the body save the neck.

There was no paralysis of any portion of the body, but there was slight impairment of motion of the right arm and leg. The head could be moved with little more freedom toward the left, but a slight force caused the patient to cry out and to steady his head with his left hand. There was rather less deformity than at first at the back of the neck; the thyroid was not so prominent. Liquid food was taken without difficulty. He passed a restless night, constantly pulling at the bedclothes, tossing about on his couch, and muttering in delirium.

Forty hours after the injury it was noticed that he moved the right arm and leg less frequently although both members could still be brought into use by a special effort of will. Pupils as the day before; respiration also; pulse 60. The patient responded to loud shouting, but could give no intelligible answers, although frequent attempts at utterance were made. The urine dribbled constantly.

Seventy-two hours after the accident the pulse was 100; respiration 20. Increased loss of power, but members still capable of being moved.

Eighty-four hours after the injury the pulse was 130, feeble; respiration 24. Delirium less violent. Patient remained quiet, except when partially awakened. When roused by any cause the left hand still pulled the bedclothes. The right arm and leg were still capable of being moved slightly, but the muscular power was weakened. Unconsciousness increased with total inability to speak. Bowels not moved since the accident. Pupils normal in size, still contracting under the influence of light. Liquid nourishment has been swallowed up to this time, but was now refused. Died quietly ninety-eight hours after the injury.

Post-mortem.—Examination of the neck alone was permitted. The posterior cervical muscles were filled with extravasated blood from the occiput to the fourth vertebra. The spinous prominence of the atlas lay to the right of that of the axis and on a plane posterior to it, causing the axis to appear as though it had been pushed forward. In reality, however, its position in relation to the third vertebra was normal—the atlas being the dislocated bone. The left inferior articular process lay behind the articular process of the axis, while the right inferior articular process of the atlas lay anteriorly. This displacement was permitted by a fracture of the odontoid process of the axis. One fracture extended directly across its base, while the other had broken off a small portion of the anterior surface—the line of the fracture being almost at right angles to the first. The odontoid process, however, was still held in position by the transverse odontoid ligature, which was unruptured. As noticed during life, the atlas could not be rotated to the right, while it could be turned to the left. Strong extension made upon the atlas permitted it with difficulty to be brought into position.

Fracture of the Third, Fourth, and Fifth Laminæ; Death.—W. P., aged forty years, fell from a scaffolding, a distance of twenty feet, striking the top of his head on a curb, and alighting as nearly as possible with the axis of his body in a straight line. When seen half an hour later he was suffering from shock. His pulse was 80, and his respiration feeble. He was perfectly conscious but indifferent to surroundings. There was a large, lacerated wound of the scalp four inches in length transversely across the forehead. In the region of the third and fourth vertebræ there was marked displacement forward of the third with prominence backward of the fourth dorsal spine. There was total paralysis of both motion and sensation, and of all parts of the body below the portion supplied by the corresponding nerves. Neither urine nor fæces had been passed since the accident. There was no priapism. Extension and counter-extension had no effect on the deformity.

The patient rallied for two hours, the pulse reaching 110 and the temperature 100°. He complained a great deal of pain in the back of his neck and shoulders. Soon

afterward the respiration became more hurried, the heart's action much more feeble, and although perfectly conscious for one or two hours, he soon sank into a state of drowsiness, and died ten hours later.

At the autopsy there was found a fracture of the body of the fourth dorsal, with fracture of the laminæ of the third, fourth, and fifth. The third was greatly displaced forward, carrying with it a fragment of the fourth. The cord was entirely torn across at the junction of the third with the fourth, and was pulpified for half an inch and compressed by the fragments of the other laminæ.

Laminæctomy would have relieved pressure, but would not have restored the crushed and torn cord.

SUPRA-VAGINAL HYSTERECTOMY.*

BY J. M. BALDY, M. D.,

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It is not the object of this paper to discuss the different methods of surgical treatment for uterine tumors nor to more than incidentally touch upon their medicinal treatment. My personal practical experience in the surgical direction has been wholly that of supra-vaginal amputation, excepting in those cases of small uterine fibroids where it has been been found advisable to remove the appendages only. In this connection I may say that where the opportunity presents to choose between the removal of the appendages and the enlarged uterus itself, I always favor the removal of the diseased uterus, along with the tubes and ovaries. The one and only point which comes into consideration in this decision is whether or not the uterus is large enough to be delivered through the abdominal incision. If it can be delivered, the hysterectomy is always performed. To my mind one of the great advantages gained in hysterectomy, by the extra-peritoneal method, over oöphorectomy, is that no stump or raw surface is left in the peritoneal cavity to become the seat of suppuration, or to whose freshened surface loops of intestine can become adherent. In uncomplicated cases the operation amounts to little more than an exploratory incision, and in my opinion is as safe as an ovariotomy.

I have operated fifteen times for large uterine tumors. In fourteen cases the uterus was removed, but in the remaining case the operation was ended as an exploration. Of the fourteen finished operations, two died.

The patient whose tumor was not removed was a white woman about thirty-five years of age. The growth had existed for more than ten years. When she was first seen she was in bed, where she had been for some weeks, with an attack of abdominal pain. For months she had only been able to be about at odd times, and considered her life a burden. An operation had been proposed to her a long time before, and its dangers brought vividly before her eyes. She had continued to suffer from pain and hæmorrhage, until, in spite of her former fears, she was, at the time I saw her, determined to have the operation performed at all hazards. In spite of her long suffering she was still a strong, hearty-looking woman. The abdomen was opened at the Gynecean Hospital before a number of physicians, and the tumor found to extend above the pelvic brim. The intestines were adherent over it at various points, and had to be torn loose in order that a careful exploration could be made. The growth was found to be in the broad ligament, and was consequently immovable. The only adhesions which existed were the intestinal ones, which had been torn through. The removal of the tumor meant a complete enucleation of a solid growth, with all the chances of death from hæmorrhage which such procedure entails. It was decided wise to end the operation, explain the condition to the woman, and let her decide whether or not she desired to risk its removal at some subsequent time, or preferred a trial at electro-puncture. The result was a complete symptomatic cure. It is now some five or six months since the operation and the woman declares she has never been so well in her life; she attends to all her duties, goes to dances, and in other ways leads an active life. She declares that the tumor is rapidly decreasing in size, and is most confident that it will disappear altogether. She looked at me most sceptically when I told her it would not go away, and that some day all her old symptoms would come back.

The last time I saw her—a month ago—I was considerably staggered by the fact that there was an undoubted decrease in the size of the enlargement. It is barely possible that it might eventually turn out to be

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another example of a solid tumor becoming absorbed after an exploration; several such cases have been reported by Tait and others.

One of the points of greatest interest to me in this case is the fact that her relief is not dissimilar to what is claimed for the electrical treatment. Had she gone to Dr. Massey for that treatment, as I advised her to do, and which she would have done had she not gotten well so rapidly, electricity would have obtained the credit for the cure. As it is, the lesson taught should not be lost. Is it not possible that the great relief apparently obtained by the electrical treatment is at times a mere coincidence? Or would not any profound impression bring about a similar result in at least some of these cases?

The two cases which died were both very bad subjects for operation, and their deaths can in no way be used as an argument against the operation. The true deduction to be drawn from the result in these two cases is that the operation should not be left as a last resort, as is advocated by Keith and the electricians, but that it should be undertaken early, and while the tumor and patient are both in a good condition of health. It is the same old battle which had to be waged so long and so vigorously in the case of ovarian cysts, and the end will be just as surely the same—that is, removal before the woman's health is broken down, and before the tumor becomes unhealthy and adherent.

The first death occurred in a colored woman, about 35 years of age. The tumor was extremely irregular, and extended up to the ensiform cartilage. The patient was in the last stages of emaciation, and could only walk with the greatest difficulty. It was a serious question in the minds of some of my colleagues, who examined her, whether the disease was not splenic or a malignant omentum. I was rather inclined to the latter opinion myself, and went to the operating table prepared to meet any condition or complication whatever. The woman, her husband, and her doctor were all told that her chances for recovery without the operation were *nil;* with the operation that they were little better, although there were some and the only chance. They all agreed upon having the operation, and it was performed at the Polyclinic Hospital in the presence of my class. The omentum was adherent over the upper part of the tumor, which proved to be a nodular uterine fibroid. The omental vessels, which were as large as the radial, were tied and cut away, and the tumor delivered. The appendanges were diseased, and on one side the tube was distended with caseous matter. A good pedicle was secured, and the woman was in her bed within the hour. For five and a half days there was but a single bad symptom—a pulse between forty and fifty beats to the minute. The bowels were opening daily of their own accord, the temperature was normal, the appetite was good, and solid food was being taken with a relish. The abdomen was flat, and there was a minimum amount of pain. She was so well that her doctor was notified that she was safe. At the end of the fifth day she began to develop bad symptoms; the abdomen gradually distended, the pulse became rapid and hard, the temperature slightly elevated, the bowels obstinately constipated, food was refused, and finally vomiting set in, and she died at the end of three and a half days from septic peritonitis.

How it was contracted is still a mystery to me, as there was no drainage-tube used, and the dressings had not been touched since the day of the operation. The stump was perfectly dry and sweet.

The second case was that of a white woman, thirty-two years old. Three years ago she had consulted me, and refused operation, preferring electrical treatment. Off and on during this period she was under the care of Dr. Massey, and toward the end he resorted to electro-puncture through the vaginal vault. She stood this treatment fairly well for a few times, but finally suppuration occurred and a sinus track opened on the outside of the left labia. Pus discharged freely from both the vagina and the outside sinus. When Dr. Massey asked me to see her with the view to an operation, she was bed-fast and could barely move; she was profoundly septic, and too tender to handle. A finger in the vagina disclosed a fluctuating nodule, apparently of the fibroid, in the posterior cul-de-sac. This, taken in conjunction with the discharge of pus, made a pretty clear diagnosis of suppurating fibroid tumor following electro-puncture. I gave as my opinion that the only chance the woman had for her life was to get rid of the suppurating mass. Everybody concerned was willing and anxious that she should be given the chance, so I admitted her to my wards at St. Agnes's Hospital and performed the operation. The intestines and omentum were found adherent to the top of the tumor; the tumor was adherent in every direction to the pelvic walls; both ovaries were found posterior to the uterus, and both formed cysts as large as a goose-egg and an orange respectively; the tubes

were both diseased. The appendages were closely adherent, and only freed with difficulty. It was found that the fibroid was not suppurating, but that one of the ovarian cysts was. The puncture-needle in one or more of the treatments had entered this cyst, which was almost directly in the median line, and was the "fluctuating nodule" which was detected at the first examination. The external sinus opened into this cyst, and when the tumor was removed it left the open mouth of the sinus behind, at the same time deluging the whole pelvis with the dark, virulent cyst contents. A clean removal of the uterus and both appendages was secured; the pelvis was flushed out most carefully and thoroughly, and a drainage-tube was placed at the opening of the sinus track. In spite of all precautions, the whole pelvis suppurated, and the woman died of septicæmia on the sixth day.

Certain it is that neither of these deaths ought to weigh against the operation of hysterectomy in cases where the conditions are fairly favorable. If cases are ever to be considered last-resort ones, these come in that class, and had I been operating for statistics rather than for the good of the women, nothing would have induced me to touch either of them.

As I have said, twelve cases recovered, and went home well women. With one or two exceptions, they were all complicated cases—short, thick pedicles, or pedicles which had to be manufactured; diseased tubes and ovaries; adhesions. One case had a nodule as large as the fist protruding into the vagina from the cervix. This mass had been sloughing for weeks, and the woman was deeply septic. The operation, which was performed at the Gynecean Hospital, was done in two stages. With knife and scissors the sloughing tumor was removed from the vagina. The instruments were quickly changed, and a supra-vaginal amputation finished the operation. So septic was the woman, that when the stitches were removed on the eighth day the whole line of the incision gave way and the intestines protruded in a mass. They remained out for about two hours before I could be found to replace them. Fortunately, my assistant, Dr. A. C. Wood, reached the hospital earlier than myself, went immediately to work, and was just replacing the protruding mass as I walked into the operating-room. In spite of this accident she made a good recovery, and is to-day well and at her usual occupation. Two of the twelve patients who recovered from the operation are dead. The other ten, as far as I know, are alive and in better health than they have been for years. The two deaths were due, in one case, to a subsequent operation for an ovarian cyst; in the other, presumably to heart disease. About six weeks or two months after her return home, while in apparent perfect health, she was suddenly seized with syncope, and was dead within half an hour.

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 9th, 1891.

Dr. De Forrest Willard read a paper on Fractures and Injuries of the Spine in the Cervical Region, etc. (See p. 49.)

Dr. J. W. Baldy read a paper on Supra-Vaginal Hysterectomy. (See p. 53.)

DISCUSSION.

Dr. G. Betton Massey:—Dr. Baldy is to be commended for going into the subsequent history of his cases—a thing that is not often done. I must, however, take issue with him in regard to the case which I referred to him. I feel perfectly confident that in each puncture the needle went into solid tissue, and not into a cyst. The position of the nodule was that of a retroflexed uterus, a mass clearly presenting in the posterior vaginal vault. Another reason against the view of Dr. Baldy is that at no time was there any reaction from the puncture. An abscess formed, opening on the inner side of the thigh, but I certainly saw no septic condition. The temperature was not above 99.5°, and my idea of sepsis is connected with a higher temperature than that. This was her condition up to the time of operation, and in fact the woman felt so well that I had great difficulty in prevailing on her to have the operation performed. I think that, possibly, if the operation had been limited to a vaginal procedure, with the object of evacuating the pus, the result might have been different.

I think that Dr. Baldy should also have mentioned that three years ago, when the woman came under his observation, she was exceedingly tender on both sides in the re-

gion of these diseased appendages. This makes me think that the diseased appendages had been present for a long time, acting as a hindrance to the electrical work. After this condition was revealed by section the better plan would have been to remove the appendages and allow the healthy fibroid to remain.

I also want to take exception to the suggestion that the results of electricity are simply coincidences. Coincidences are very fortunate adjuvants in most of our work, but they are a mighty poor thing to depend upon. I do not think that the electrical workers throughout the world who have treated these tumors, could have gotten their results simply through coincidences.

It might also be said that the result obtained in a case which I saw yesterday was a coincidence. This was a dispensary patient that had been treated by abdominal electro-puncture as well as by vaginal electro-puncture and intra-uterine applications. Up to the time of the use of abdominal puncture, in which three needles were simultaneously employed, the progress was slow. She was quite lame from pressure on the crural nerve, and possibly from diseased appendages. In this case operation was recently urged by Dr. Baldy. As the result of these punctures, and the use of a current of 100 to 200 milliampéres, she is now so comfortable that she has not time to come to the dispensary for further treatment, the tumor being very materially reduced in size. After being an object of charity for years, she is now earning a living at general housework within a half square of this hall.

Dr. Charles P. Noble:—My own experience with abdominal hysterectomy has not been very large, for the reason that most of the fibroids that I have seen have not especially troubled their possessors. The majority required only medical treatment. Probably not more than ten per cent. were especially troublesome, and many of the women did not know that they had any tumor. On the other hand, as we all know, fibroids can give rise to dangerous symptoms either from hæmorrhage or pressure.

In my work I have taken a view opposite to that of Dr. Baldy, particularly when the fibroid is from medium to small. If the symptoms demanded operation, I have felt that I was doing the patient the best service by removing the appendages and not disturbing the tumor. None of these cases have died, and the results have been all that could be desired. An objection to hysterectomy by the extra-peritoneal method is, that a weak spot is left in the abdominal wall which is liable to become the seat of hernia. This is one reason why I prefer removal of the appendages where it can be done. Where the appendages are diseased, particularly if pus is present and discharged into the pelvic cavity, this would influence me to remove the fibroid, particularly if it just about filled the pelvis. If this were not done, I should anticipate death from sepsis. It is practically impossible to wash out the pelvis if the tumor about fills it, and with the tumor present it is impossible to secure drainage.

I quite agree with those who urge early operations when the tumors are giving rise to trouble. I have witnessed some fifteen hysterectomies, although I have done but two myself. All of these cases have recovered. Where the operation is not complicated by adhesions, and where the patient is not broken down, I quite agree that the risk of the operation should not be greater than that of ovariotomy.

Dr. B. F. Baer:—I congratulate Dr. Baldy upon his success, and I believe that in the main I agree with him as to his advice in regard to operation. Where the appendages can be thoroughly removed, and the tumor is small, I should prefer to remove them, but in some cases they are so spread out that thorough removal is not possible. In such cases I prefer hysterectomy. The result in early hysterectomy is very good, almost as good as in ovariotomy, and I have become an advocate of early hysterectomy in the cases requiring operation. In my experience, fibroid tumors, as a rule, do give rise to trouble. The fact that the patient submits to an examination, and will submit to treatment by electricity, by puncture, and other methods of treatment more or less painful, and even to hysterectomy, shows that the disease does give rise to trouble. I cannot understand why it is that men of large experience say that fibroids are not attended with symptoms. It is seldom that fibroids actually kill, but often the patient would prefer death to a continuance of the suffering. When, therefore, the tumor is giving rise to symptoms, and is of such a nature that its removal is not very dangerous to life, and the appendages are readily *entirely* removable, I prefer hysterectomy.

Dr. Baldy did not discuss methods, and therefore I shall not take up that subject, except to say that I believe the pedicle should be treated intra-peritoneally whenever practicable—*i. e.*, when it is small. This certainly simplifies the operation, renders the after-treatment easier, and makes the

condition of the patient after recovery more satisfactory. The patient recovers as well, if not better, when the pedicle is dropped. In the case that died at the Polyclinic Hospital, I have thought the result might have been different had the pedicle been dropped. My impression is that the woman died of tympanites more than anything else, and, as is well known, the extra-peritoneal method of treating the pedicle is very apt to be followed by tympanites and obstruction of the bowel from traction on the rectum.

In regard to Dr. Massey's case, I can scarcely agree that the appendages could have been removed and the uterus left. One of the tubes was quite diseased and spread over the tumor. If any operation was indicated hysterectomy was the one, and the only portion of the technique that I would dissent from is the manner in which the pedicle was treated.

Dr. Baldy:—In regard to the treatment of the pedicle I shall only say that I prefer to treat it outside, and my experience has been such that I shall always employ the extra-peritoneal method. The advantages, both theoretical and practical, are in favor of this plan.

In regard to Dr. Massey's case, I can only theorize as to the point of the puncture. I think myself that the majority of the punctures extend into the fibroid, but I know that some of them had been into the cyst, thus infecting it. The cyst was densely adherent at the point of puncture. I do not think that a fibroid will always show where a puncture has been made.

I have not seen much tympanitis after hysterectomy. Those cases that get well do not have distention. Where there is septic peritonitis there is always obstruction. In both of the fatal cases that I have reported there was well-marked septic peritonitis. Neither can I agree in regard to the liability to hernia after this operation. I have seen only one hernia after hysterectomy, and that occurred at the seat of the drainage-tube an inch above the pedicle. Although I see many cases after abdominal section coming back complaining, I have not seen one case of hysterectomy with post-operative trouble.

Many operators prefer oöphrectomy, and always do it when it can be done. I prefer hysterectomy, and give it the preference. In some cases you cannot remove the ovaries, and in others you may not be able to find the ovaries. In the case of exploratory operation reported, I found one tube which was distended with a bloody fluid, but I could not find the corresponding ovary or the ovary and tube of the opposite side.

Sometimes fibroids do not give rise to symptoms. One case operated on had very few symptoms. The girl had been told that she had a tumor, and came determined to have an operation, feeling that she would die if the tumor were not removed. The tumor was large. There was little hæmorrhage or pain, but there was one point which would in the opinion of many justify operation, and that was that the patient was only twenty-five years of age and the tumor was growing rapidly. The vast majority of fibroids I have seen have been advised to have nothing done. In future, with my present experience, I would consider such advice, in many of these cases, as unjustifiable.

Selected Formulæ.

SORE MOUTHS OF NURSING WOMEN.

℞
Listerine.....f℥ ij.
Glycerini.....f℥ ij.
Aquæ menth. pip.....f℥ ij.
M. Sig. Use a mouth wash two or three times a day.

—*Weekly Med. Rev.*

A LOTION FOR THE ALOPECIA FOLLOWING ACUTE DISEASES.

The following formula is given (*L'Union Medicale*) as a preventive of the alopecia which is observed during convalescence from grave acute diseases:

℞
Alcohol, 80 per cent.....℥ 2½.
Camphorated alcohol.....℥ 1¼.
Rum.....℥ 1¼.
Tinct. of cantharides.....℥ 1¼.
Glycerin.....℥ 1¼.
Essence of sandalwood, wintergreen and roses of each.....gtt. v.
Muriate of pilocarpine.....gr. vijss.

If the hair becomes dry, inunctions of oil of sweet almonds or castor oil may be made from time to time.—*Univ. Med. Mag.*

HEADACHE.

In many cases rebellious to all other medication, Pescarolo has obtained good results with the following mixture:

℞
Antipyrin.....grammes iv.
Phenacetin..... " ij.
Antifebrin.....gramme j.

He supposes that the favorable action is due to a new body which is formed in the mixture.—*Nouveaux Rémedes*, June 8, 1891.

COMPOUND WINE OF CREASOTE.

Dr. Fraenkel (*Il Raccoglitore Medico*, No. 14, 1891) gives the following to tuberculous

patients whose temperature is not high and in whose sputa the bacilli are not numerous:

℞ Creasote..... ..grammes xv.
Tinct. gentian..... " xxx.
Alcohol..... " cclv.
M. Two or three tablespoonfuls a day.

TREATMENT OF SWEATING HANDS.

The *Journal de Medecine* gives the following:

℞ Tinct. of belladonna.....ʒ j.
Cologne water.....ʒ j.
M. Add a little glycerin at the moment of using, and with the mixture rub the hands strongly. The hands should first be washed in soft water and thoroughly dried.

TREATMENT OF SYPHILIS DURING PREGNANCY.

E. Besnier recommends the following course of treatment:

1. Tonic medication. Good food, syrup of the iodide of iron, preparations of quinine.

2. Specific medication. Give every day one pill, as follows:

℞ Hydrargyri bichloridi.....gramme 0.010.
Extracti opii..... " 0.005.
Extracti gentianæ..... " 0.005.
Glycerinæ.....q. s. ut ft. massa. M.
Sig. For one pill.

3. At the same time prescribe iodide of potassium is doses of 0.50 to 1.0 gramme (7½ to 15 grains).

This treatment in continued throughout pregnancy, and the increase in the weight of the patient will testify to its efficiency.—*Revue Médico-Chirurgicale des Maladies des Femmes*, July 25, 1891.

FOR BLENORRHAGIA.

In the treatment of this disease, P. Thiery, (*Anal. de Malades Genito-urinaires*) recommends during the first period, abortive injections of nitrate of silver, and during the second period injections of iodoformated oil, frequent bathing, alkaline drinks, good diet, etc. After urination the following formula should be employed for injections:

℞ Iodoform, finely powdered.....grammes x.
Oil sweet almonds or glycerin. " lx.
A disinfectant substance, such as eucalyptus, vanilline, etc.q. s.
M. Sig. A syringeful of 10 c.c. is to be injected, and the injection kept in for 10 minutes.

—*La Médecine Moderne*, November 19, 1891.

ANTIPRURITICS IN URTICARIA.

Quinquad (*Deutsche Medicinische Wochenschrift*, 1891; No. 32).

Lotion.

℞ Boric acid.....grammes xxx.
Chloral hydrate..... " v.
Distilled water..... " clxxx.
For external use.

Dusting-powder.

℞ Salicylic acid.....grammes v.
Zinc oxide..... " xv.
Powdered starch..... " xxx.
For external use.

At the same time, alkalis are administered *internally*, and if these fail to produce an effect, sodium arseniate.

VARICOSE ULCERS.

Dr. J. Braun (*Lo Sperimentale*, No. 14, 1891) speaks highly of the following salve:

℞ Zinc. oxyd.....ʒ iv.
Lanolin.....ʒ iv.
Ung. emmolient.....ʒ jss.
M. f. ung. Apply locally on a piece of cloth a layer of the thickness of a knife-blade and over this a bandage.

Keep the patient abed until the ulcer has healed. If the ulcer has an unhealthy appearance the dressing should be removed three to four times daily.

The unguentum emmoliens of the Austrian Pharmacopœia is composed of white wax, 10 grammes; spermaceti, 20 grammes; oil of sweet almonds, 80 grammes; rose water, 20 grammes.

TREATMENT OF HYPERIDROSIS.

In the *Revue Général de Clinique et de Thérapeutique*, the following prescription for sweating of the hands and feet is given. The application is to be made night and morning. The part is first washed with hot water and immediately afterward the following ointment is applied:

℞ Ichthyol.....ʒ j.
Vaselin.....ʒ jss.

ANTISEPTIC ADHESIVE OINTMENT.

The following is an antiseptic adhesive ointment used at the hospital St. André:

℞ Zinci oxidi.....gr. ivss.
Zinci chloridi.....gr. xxijss.
Gelatinæ.....ʒ v.
Aquæ.....ʒ vijss.

This dressing protects the surface of wounds and dispenses with the use of bandages after operations. It is especially of service for the dressing of wounds on the face.—*Gaz. Hebdomadaire des Sciences Médicales*, August 16, 1891.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

Prof. M. V. Soubbatine (*Il Raccoglitore*, No. 12, 1891) employs the following in epidemic cerebro-spinal meningitis:

℞ Sodol. pur.....grammes 3.
Acetanilid..... " 1.80.
Sufficient for twelve pills. Three or four during twenty-four hours.

Soubbatine cured one severe case and Kratow saw rapid recovery follow in two cases after the use of these pills.

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LEADING ARTICLE.

PEROXIDE OF HYDROGEN IN THE TREATMENT OF DIPHTHERIA.

The success which followed the use of peroxide of hydrogen as a solvent and antiseptic in the treatment of ulcers and suppurating cavities soon suggested its employment in diphtheria. When we reflect that this substance was discovered in 1818 and that it has many times been advocated by experienced observers, it seems strange that its value was not earlier appreciated. During the past five years, however, it has taken a prominent place among antiseptic and germicidal remedies, and from the present expression of medical opinion it is certain that its usefulness will be greatly extended.

The evident advantage of peroxide of hydrogen over all other substances having the power of destroying disease-germs is its almost entire harmlessness and the readiness with which it can be employed in the various cavities of the body, as well as externally. Its efficacy being due to the potency of the nascent oxygen liberated when it is brought in contact with organic matter, it more thoroughly and safely reaches the substances we wish to destroy than any other agent of its class.

While there are some expressions of doubt of the ability of this substance as a germicide, there is, on the other hand, no question that it is in this respect one of the most powerful agents known to the bacteriologist. When it is remembered that the medicinal peroxide of hydrogen should be of fifteen volumes strength and that but few specimens in the market are of over five, it is not strange that the results obtained from its use have not been universally satisfactory. Surely no more can be expected of this substance if in too weak solution than of the now popular bichloride under the same circumstance. Regarding the proof of its germicidal power, we would refer to the experiments of Miguel who found, after a long series of carefully conducted observations

that only two other substances are more powerful germicides than this; the two being the biniodide of mercury and the same salt of silver. He thus accords to the peroxide of hydrogen greater germicidal strength than that possessed by bichloride of mercury. These researches have been repeatedly confirmed, and it has even been shown that it is positively destructive to spores, the most difficult of organic matter to destroy. Gifford found that a contact of forty-five seconds was sufficient to kill adult anthrax spores.

In the local treatment of diphtheria we have three primary indications: First, to disinfect the discharges and thus prevent the absorption of septic substances; second, to destroy the disease-germs; third, to remove the false membrane. From the present state of our knowledge concerning the properties of peroxide of hydrogen, it seems that in it we possess a substance which largely, if not entirely, fulfils these indications. Moreover, when we add that it is harmless when taken internally, easily applicable to all varieties of the disease and to all ages of the patients, certainly no local application of which we are aware so fully meets our wants.

The literature of the subject offers much valuable information respecting its utility in this grave affection. For instance, Dr. Bleyer says: "While the membrane is thin and friable, the action of this agent is thorough, quick and effective; the deposit melts down before the contact of it like sugar in water, to be reproduced in a short time and again removed until the diseased tissue beneath can be plainly seen free from this characteristic covering." Such illustrations might abundantly be given.

What is the best method of applying this substance? The answer to this question will be modified by many circumstances, such as the age and tractability of the patient, the location of the membranous deposit, etc. If the case is an adult or a child who will co-operate with the physician, the peroxide is best applied directly to the parts by a cotton wad or brush, which is far more effectual than the spray or gargling, since it mechanically removes the outer and most toxic portions of the membrane and permits of immediate penetration of the peroxide to the deeper layers or even to the mucous membrane. Such applications should be followed by similar ones of the bichloride of mercury. In case of nasal complication, it must be applied by means of insufflation or injection to the affected parts. Atomizers can now be had specially constructed to project the spray to the posterior nares, and by the same means, or by a syringe, or eye dropper the peroxide can be applied through the anterior nares. In cases of children where the resistance to the use of the probang is so violent as to render the method inadmissable or undesirable, the pharynx, as well as the nasal chambers, may be flushed by means of a common syringe, a current being projected through each nostril. Should the nose become stopped up it must be cleared by a pledget of cotton on a suitable instrument before the injection is attempted. Where the applications can be made by this method through the mouth, the current should be directed to the back of the tongue, to the larynx and to the posterior nares. Such injections are followed immediately by the formation of a frothy discharge which arises from the evolution of nascent oxygen by contact of the peroxide with the septic organic substances. In fact, the amount of the froth is a fair index of the amount of mucous membrane involved, and the disappearance or increase of the false membrane is at once indicated in the quantity of this discharge.

The evidence available certainly indicates that hydrogen peroxide will be found to be the most valuable of all substances in our armamentarium for the local treatment of diphtheria, but it is of pre-eminent importance that only absolutely reliable preparations should be used, which should be fresh, free from an excess of acid and of full fifteen volumes strength. It seems almost needless to say that the preparation should be kept in a cool place and that it rapidly deteriorates with age, and when exposed to the atmosphere.

CORRESPONDENCE.

PHYSICIAN AND APOTHECARY—DR. WM. BULLEYN.

TO THE EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—Dr. G. Granville Faught in your issue of November 14th brings under the notice of your readers the name of Dr. Wm. Bulleyn, whose works—"The Government of Health," 1559, 800; "A Regimen Against the Pleurisy," 1562, 800; Bulleyn's Bulwark of "Defense Against all Sickness, Soreness and Wounds, that dooe Daily Assault Mankinde," 1562, 800; "A Dialogue Both Pleasant and Pietifull, wherein is a Goodlie Regimen, Against the Feuer Pestilence," 1564, 800—prove him to have been far in advance of his contemporaries.

He was born in the early part of the reign of King Henry the VIII, and was educated at Cambridge. Afterwards he went on a tour through Germany and Scotland where he pursued his favorite study, botany.

In the year 1888 the Early English Text Society published a re-print of "A Dialogue Against the Feuer Pestilence," from the edition of 1578 collated with the earlier editions of 1564 and 1575, under the editorship of Dr. Mark W. Bullen and A. H. Bullen. The work is valuable as containing the narrative of "*Mendasc*," the original of Swift's "*Splendide Mendasc*," who describes a "fletyng Island swymming about the sea, by what means I knowe not, whether occasioned by corke, wooll, &c.; it would by the winde, shifte from place to place. Sume said it was a shred of the bankes of Paradise."

From a medical point of view the dialogues between the sick merchant, "*Antonius*" and the physician Maister "*Tocrub*," and the apothecary "*Crispine*" and "*Tocrub*," are interesting.

Physician and apothecary on their way to the patient are thus described by a citizen: "Thether euen within this twoo howers I did see Maister Tocrub solmonely ridyng upon his mule, with a side goune, a greate chaine of gold about his necke, his apothicarie *Crispine*, a neighboure's childe borne hereby in Barbarie, and his little lackey, a proper young applesquire called *Pandarus*, whiche carrieth the keye of his chamber with hym. These are all gone in at the gates to that noble Italian."

The physician directs the attendants to "Drawe the fountaines, open the luket of the windowe, set sallowes about the bed besprinkled with vinegar and rose water. Take off that hot mantle; let his head and shoulders be bolstered up."

"*Antonius.* To what persones I praie you, doeth the pestilence come." "*Medicus.* Moste chiefly to theim under the place infected, then to sluttishe, beastly people, that keepe their houses and lodyngs uncleane, their meate, drinke, and clothyng moste noysome, their laboure and traudile immoderate; or to theim which lacke provident wisdome to presente the same by good diete, ayre, medicine, &c." * * * * When there doth come a "sodaine alteration or change in the qualitie of water, * * * * * * or when strong windes doe carrie pestilent fume or vapours from stinkyng places to the cleane partes, as bodies dead of the plaugare unburned. * * * * * This is a dispersed pestilence by the inspiration of the ayre."

I am Sir, Yours Truly,
GEORGE A. FOY, F. R. C. S. I.

PROMISCUOUS SPAYING OF WOMEN.

EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—In the issue of the REPORTER for December 12th, 1891, Dr. Noble criticises my article on the removal of the ovaries of women. If the Doctor had read the article a little more carefully, he might have observed that I referred to "a certain class of ambitious young surgeons, each striving to count the greatest number of abdominal sections." This, it is needless to say, does not include "the worthy successors and followers of McDowell, Atlee, Sims, Wells, Keith, etc."

My object in bringing the subject to the attention of the profession, was not to make baseless charges against respectable gynæcologists, as my critic would have it, but to prevent, if possible, women from being unnecessarily mutilated by would-be operators. The fashionable gynæcologist would no doubt use more elegant terms than unsexed or spaying for castration of the female, but to the general profession these terms seem to be well understood and wonderfully expressive. Only a few days ago, a woman, the mother of four children, applied to me to have the ovaries removed, that she might have no more children. I tried to dissuade her from her purpose, but she seemed determined to accomplish her object, and informed me that she knew of several women who had gone through the operation, and that she expected she would have no diffi-

culty as she was prepared to pay liberally for it.

This, you will observe, is another side of the same subject, and shows conclusively, at least to me, that there are certain parties who follow the profession of "The promiscuous spaying of women."

Very respectfully, yours,

WM. C. TODD.

BOOK REVIEWS.

THE SUPREME PASSIONS OF MAN. By PAUL PAQUIN, Late Professor of Comparative Medicine, and Director of the Bacteriological Laboratory, Missouri State University; Member of the American Public Health Association; the American Medical Association; Editor "Bacteriological World," Etc., Etc. Published by The Little Blue Book Company, Battle Creek, Mich., 1891.

This little book is one of a series of publications, by the Little Blue Book Company, which is intended to instruct the masses regarding various scientific subjects, and these subjects are presented in plain and simple language entirely suitable to the class of readers for whom the series is intended. The present volume is a freely expressed talk upon science, religion, morality and medicine, especially as they have to do with the *supreme passions* of the race. The author found it necessary, in accord with his views of the existing moral state of society, to reveal to the public eye the most common of social vices, and to his credit we will say that in general this has been done with considerable tact and delicacy of expression. The intent of the author is to prove that the passions of man are directly due to pathological nutrition, the results of wrong methods of living, eating and drinking, and that religion alone is powerless to cope with these passions. He shows how science and religion together could make the world a better place to live in, and demonstrates logically how food is the primary cause of racial characteristics, and of the development of the unnatural passions. A chapter is devoted to his theory of the causation of alcoholism, morphism, nicotism, etc., and is well worth the reading. While we cannot agree with some of the views expressed, the book as a whole contains many plain truths, and is a strong argument for better and more careful methods of living. It may be possible that it will do good to a certain class of intelligent readers, but it is certainly not a book to be carelessly read and condemned because it speaks plainly and truthfully of frightfully common human vices, and for the same reason it is possible for such knowledge to do some harm to pure, innocent minds. It is certainly one of the most vexing questions of to-day to decide just how the public generally should be made acquainted with such scientific truths as are treated of by the author of this book. We would heartily recommend its perusal to the profession as a popularly arranged contribution to sociological literature; and some parts of it will be found interesting because of ingenious theories respecting the growth of the passions. It is one of the books which are the outcome of the life-work of the author, and one may read in every page the effects of the writer's work in bacteriology and microscopic anatomy, just as the author of "Natural Law in the Spiritual World" combined in his book the results of his theological and scientific occupations.

A TEXT-BOOK OF PHYSIOLOGY. By M. FOSTER, M. D., LL. D., F. R. S., Professor of Physiology in the University of Cambridge, England. Fourth American from the fifth English edition, thoroughly revised. Philadelphia: Lea Brothers & Co. Octavo 1072 pages, 282 engravings. Cloth, $4.50; Leather, $5.50.

The appearance of another edition of Foster's Physiology again reminds us of the continued popularity of this most excellent work. There can be no doubt that this text-book not only continues to lead all others in the English language, but that this last edition is superior to its predecessors. It is evident that the author has devoted a considerable amount of time and labor in its preparation; nearly every page bearing evidences of careful revision. Although the work of the American Editor in former editions has been by the author largely adopted in a modified form in this revision, much was still left for the former to render the work fully adapted to the wants of our American students, so that the American edition will undoubtedly continue to supply the market on this side of the Atlantic. The work has been published in the characteristic creditable style of the Lea's, and owing to its enormous sale, is offered at an extremely low price.

PHOTOGRAPHS OF THE BACILLUS LA GRIPPE were presented to the Association Francaise pour l'Avancement des Sciences by M. Teissier, of Lyons, and mentioned in *Le Progres Médical* of October 3d. This culture and inoculations with it are very peculiar and interesting. It produces all the various symptoms of la grippe and even pus.

PERISCOPE.

THERAPEUTICS.

THE TREATMENT OF HÆMOPTYSIS.

Professor H. Nothnagel, publishes in a Vienna medical journal an interesting paper on the treatment of hæmoptysis. The first thing, he says, is absolute rest. If the loss of blood is at all serious, the patient must not utter a sound; if it is necessary he should speak, he must only whisper, or better still, write down everything he wants to communicate. He must not be allowed to see visitors, and the sick-room must be kept at an even temperature. The patient must take nothing warm, nor anything likely to excite or irritate. The best food for the first two days is cold milk. Regular diet may then be resumed gradually, but all food which might increase the action of the heart must be avoided in future. Formerly an opinion prevailed that the patient should be allowed to cough, the retention of the blood being supposed to be hurtful, as it was believed that tuberculosis was a consequence of hæmoptysis, but this opinion is quite erroneous. On the contrary, one of the first indications is to suppress all inclination to cough as much as possible, for which purpose morphia is the best remedy. Should the hæmoptysis not cease, other remedies must be applied. The author first mentions those remedies which ought to be eschewed, and the use of which is occasionally a physiological error. The first to be banished is perchloride of iron, the action of which on the blood is to cause it to coagulate and to form a thrombus. In the form of inhalation it would be simply useless but for the great danger in allowing a patient suffering from hæmoptysis to draw a deeper breath than absolutely necessary for respiration. The liquor ferri, if administered internally, is, according to some, not absorbed at all, but, even if it be so, it would only tend to increase the hæmoptysis. The same may be said of tannic acid and of alum, which contract the blood-vessels only when diluted to $\frac{1}{6}$ per cent., and are consequently useless for hæmostatic purposes as well as for inhalation. The author dispenses altogether with inhalation in hæmoptysis. The only two hæmostatic remedies he recommends as useful are ergotine and acetate of lead; the first may be used internally and in hypodermic injections, the latter may be given in conjunction with opium. Another remedy which he mentions, but of which he has himself no experience, is hydrastis canadensis. A few years ago hypodermic injections of atropine were recommended, and Prof. Nothnagel has occasionally seen them effective. No objection can be raised to half a teaspoonful of common salt when no other remedy is at hand. Hæmorrhage from the lungs is certainly sometimes arrested by its use, but the author is not quite sure if the success is *post hoc or propter hoc.* Nor is he certain whether, as supposed by some, a reflex irritation of the pulmonary vessels takes place. This theory is certainly physiologically feasible, as recent experiments have shown that sensory excitement in some parts causes the blood-vessels in other parts to contract. An application of ice, for instance, to the abdomen causes anæmia of the mucous membrane of the larynx. A very common remedy is the application of cold; but the ice-bag is, according to the author, of very doubtful value, as it is impossible to assume that the cold acts directly on the bleeding surface, for we do not know to what depth it penetrates. If the cold does act hæmostatically, the effect must be due to irritation of the skin. Professor Nothnagel warns us, however, that in some people the application of cold to the thorax causes cough, which is far more dangerous than the doubtful contraction of the blood-vessels can be useful. An extreme and heroic remedy is venesection. It is a well-known fact that wounded soldiers faint from loss of blood, when the hæmorrhage immediately stops, and a similar observation has been made in metrorrhagia and hæmoptysis.—*Lancet.*

HYPODERMIC INJECTIONS OF CORROSIVE SUBLIMATE IN DIPHTHERIA AND SCARLATINA.

Dr. J. Jacontini (*Morgagni*, 1890) administered by injections 1 centigramme of corrosive sublimate in eight or nine days during an epidemic of scarlatina. The fever was reduced and at the same time the manifestations in the throat were modified. Encouraged by these results the author used this treatment in two cases of diphtheria with the satisfaction of obtaining a rapid attenuation of the morbid phenomena and followed by cure.

MOUTHWASH FOR CARIOUS TEETH.

A mouthwash said to prevent dental caries is as follows: tannin 5 grammes, tincture of iodine and tincture of myrrh, of each

2.5 gramme; potassium iodide, 1 gramme; rose water, 180 gramme. The mouth is rinsed every morning with one teaspoonful to a glass of warm water.—*Bull. de Therapeut.*, 1891, cxx, p. viii.

OSMIC ACID IN GOITRE.

Dr. S. Auerbach relates the case of a young woman of 25, suffering from goitre (the variety and dimensions not stated), in which he resorted to a "combined method" of treatment, including, *a*, a parenchymatous injection of a solution of osmic acid (1 grain to 2 drachms of distilled water), a syringeful once daily or every other day; *b*, local massage, for 15 minutes, once daily, and, *c*, the internal administration of iodide of potassium. By the end of three weeks all subjective symptoms disappeared, while the tumor was found to have greatly decreased in bulk (was half the size compared with the period before the treatment). Unfortunately, the woman was subsequently lost from sight.—*I etopis Khirurgitcheskaho Obshtchestva v Moskve*, No. 6, 1890, p. 505.

QUININE POISONING.

Dr. A. Erlenmeyer reports in the *Centralblatt für Nervenheilkunde* a case of poisoning with this drug which is of some interest. The author had previously observed abolition of the reflexes in several patients who were taking large doses of quinine, but in the case under consideration the symptoms were those of an intense reflex irritability. The patient, aged forty-two years, had taken at one dose a gramme of quinine (about fifteen grains), and on the following day two grammes in divided doses. Examination of the reflexes at this time, by tapping and the other tests, brought on general convulsions, with violent contractions of the arms and the whole body. Leaving off the medication for twenty-four hours would cause a disappearance of the nervous excitability.

TREATMENT OF PNEUMONIA IN DIABETICS.

Dr. Merklen (*Gazzetta degli Ospitali*, No. 56, 1891) regards pneumonia as one of the most dangerous complications of diabetes. It appears in diabetes without any initial chill, pains or dyspnœa; sometimes its presence is marked by intense dyspnœa, due to congestion, which may become so severe as to kill the patient in one to two days—the fulminant diabetic pneumonia of Bouchardat. It may terminate in pulmonary abscess or gangrene, yet all cases are by no means fatal. The writer narrates a case where the sugar disappeared from the urine at the beginning of the disease, to reappear during convalescence. The same was true of the polyuria, hence in such cases the reappearing of the polyuria and sugar in the urine are favorable signs. In his case there was no albuminuria. The writer prescribed caffein, 1 gramme (15 grains) a day hypodermatically, as a diuretic and heart tonic; two or three quarts of milk daily, and 1½ grammes (22 grains) of the sulphate of quinine, together with revulsion to the chest.

CURES FOR DRUNKENNESS.

There appears to be some excitement in Illinois at present over the gold cure for drunkenness. Chloride of gold is said to be the remedy, and the *Western Druggist* says there is little new about that, for a Dr. Gray, of La Porte, Indiana, practices the following method of cure regularly. When he receives a patient he sets in his room a bottle containing a pint of good whiskey, instructing the patient that he can take all he wishes. The doctor immediately commences and gives him four hypodermic injections each day, each containing one-tenth of a grain of the chloride of gold and sodium, and one-fortieth of a grain of nitrate of strychnine, and gives a mixture to be taken by the mouth containing the same with some atropine. The formula for the mixture is:

℞

Sodio-auric chloride	gr. xij.
Ammonium chloride	gr. vj.
Strychnine nitrate	gr. j.
Atropine	gr. ¼.
Fl. ext. cinchona compound	℥ iij.
Fl. ext. coca	℥ j.
Glycerin	℥ j.
Water	℥ j.

Mix, and take a teaspoonful every two hours when awake.

He sees the patients four times a day and rapidly increases the gold and strychnine until the symptoms show that they are getting all they will bear. The first day the patient drinks pretty heavily of the whisky in his room. The second day he begins to lose his desire for it. By the evening of the third day or the morning of the fourth he is totally sick of it, and will not take any more. The treatment is carried on from three to six weeks. It seems to be a great success. We are frequently asked what Haines' golden specific is. A formula for producing a powder said to resemble this preparation, was contributed to the *Druggists' Circular* some time ago, and is as follows:—

℞ Bark of bayberry root.....parts xvj.
Ginger ..... " viij.
Capsicum..... " j.
Reduce to a fine powder, and mix thoroughly.

—*Chem. and Drug.*

TREATMENT OF URÆMIA.

Prof. Tissier (*Gazzetta degli Ospipitali*, No. 25, 1891), recommends:

1. Lavage of the stomach.
2. Inhalations of oxygen.
3. When the vomiting threatens to interfere with the nourishment of the patient, one to two drops of tincture of iodine in a spoonful of water are indicated. Creasote and menthol have also been successfully used. Lecorche and Telamon have succeeded in arresting the incoercible vomiting by lactic acid:

℞ Acid lactic.....mxv--xxx.
Syrup menthæ pip.....fl℥ j.
Aquæ destillat.....fl℥ iij.

Bouchard advises rigid intestinal antisepsis.

4. For the treatment of the cerebral and nervous symptoms he advises:

For the eclampsia, chloroform by inhalation, chloral, the bromides—preferably the sodium bromide, bromide of potash being contra-indicated on account of the potash which it contains—paraldehyde, opium and its derivatives, administered with caution on account of the impermeability of the kidneys and their tendency to accumulate.

Rosenstein and Rossbach use the nitrate of sodium:

℞ Sodii nitrat.....gr. xxx.
Syrup cortic. aurantior.....fl℥ j.
Aquæ..... .....fl℥ iij.
Two to three teaspoonfuls daily.

Labaure, Lagrave and Huchard recommend amyl nitrate, which, however, is contra-indicated when there are vascular changes present.

5. In uræmic asthma tincture of guebracho or aspidospermine are to be recommended. Lecorche and Talamon regard venesection and morphine as the true remedies in this stage. Intra-venous injections of sodium salts are useful. If the heart be weak with dyspnœa, then use such heart tonics as caffeine, adonidine, digitalis and camphor.

THE TREATMENT OF SENILE GANGRENE.

In a recent issue of the *Deutsche Medicinische Wochenschrift*, Prof. Haidenhain presents his views on this subject, which are based on a careful study of twenty-five cases of senile gangrene of the lower extremity, the majority of which occurred in diabetics. It is a well-known fact that this form of gangrene is characterized by especial severity, so that the author's rules for treatment are worthy of careful consideration. He advises that as long as the gangrene is confined to one or two toes we should abstain from surgical intervention, and wait for a line of demarkation to form. Local antiseptic measures and elevation of the limb are all that is required, and we are especially warned against the detachment of the gangrenous portions with the scissors and forceps, which tends to increase the inflammation. If the gangrene spreads to the dorsum or sole of the foot, we should adopt Hutchinson's recommendation and amputate at the thigh, making as small skin flaps as possible. An extensive experience has shown that amputation below the knee in these cases is apt to be followed by gangrene of the flaps, which, if it does not lead to a fatal termination, renders a second operation necessary. If high amputation is deferred until the development of fever and suppuration the prognosis becomes the more unfavorable. While it is true that a successful result has sometimes been obtained by amputating below the knee, the weight of testimony is decidedly in favor of the high operation.

ANTIPYRIN IN THE TREATMENT OF CHOREA.

Leroux (*La Semaine Médicale*, August 12, 1891) obtained favorable results in forty-one of sixty cases of chorea treated with antipyrin. In the favorable cases, the disease terminated on an average at the end of forty-five days—the usual duration of chorea being sixty-six days. In nineteen cases, the results were not favorable, either because the disease proved refractory to antipyrine or was prolonged as post-choreic tic, or because the treatment was pursued irregularly, or was suspended on account of an intercurrent affection or of an intolerance of the remedy. Recurrences and relapses were, however, frequent, notwithstanding the continuance of the treatment. Forty-five grains (daily) constituted the minimum dose from which favorable results were obtained. In some instances, it was necessary to administer from sixty to seventy-five, and even ninety grains. The treatment was begun with from fifteen to thirty grains; for children of from eight to ten years, the dose was speedily increased to from sixty to seventy-five grains; for children of from ten to twelve, to from seventy-five to ninety grains. Some cases yielded at

once to doses of from forty-five to sixty grains; but if at the end of from eight to ten days there was no change, the dose was increased in accordance with the age of the child. If, finally, at the end of a month doses of from seventy-five to ninety grains brought about no notable amelioration, no more was hoped for from its administration. Notwithstanding the prolonged administration of large doses of antipyrin, not a single grave accident occurred.

TUBERCULIN IN LARYNGEAL PHTHISIS.

Dr. Struebing (*Deutsche Med. Wochen.*, October 8th, 1891) records the cure of a case of laryngeal tuberculosis brought about by tuberculin. There was in the case well-marked evidence of pulmonary phthisis, and the treatment is reported to have brought about an improvement in the condition of the lungs. On examination of the larynx the left vocal cord was seen to be occupied by an ulcer of considerable size, around which was much swelling and redness of the mucous membrane. The patient was extremely hoarse. After the first injection there was evidence of local reaction—swelling and injection of the laryngeal mucous membrane, and subjectively, increased hoarseness and pain in larynx, especially on swallowing, with slightly marked symptoms of stenosis. After the fourth injection no further reaction was observed. Rise of temperature was noted only after the first few injections, and then it was slight. When about nine had been given the ulcer appeared to have a cleaner look; later, improvement in this direction was undoubted; the edges, moreover, were much less prominent, and presently became obliterated, the floor of the ulcer passing insensibly into the healthy tissue around. It now became gradually smaller, and was no longer visible after the forty-third injection; this consisted of 0.1 g. tuberculin. The entire amount used up to the date of cure was 1,573 g.—*Brit. Med. Jour.*

LOCAL ANÆSTHESIA PRODUCED BY INJECTION OF WATER.

Dr. C. L. Schleich has made experiments of himself and his assistants, which demonstrate that the hypodermatic injection of simple sterilized water produces local anæsthesia of several minutes' duration. The anæsthetic area becomes the seat of a white œdema similar to that produced by the sting of a mosquito, the extent of which depends upon the quantity of water injected. The technique of the procedure differs in no respect from the hypodermatic injection or medicated solutions; the syringe and skin are disinfected. The pain produced is no greater than that resulting from the injection of cocaine, depending upon the sensitiveness of the part, and may be almost entirely prevented by spraying the parts with ether at the time of injection. The needle is inserted slowly and parallel with the cutaneous surface. The anæsthesia is so complete that incisions may be made into the skin without the slightest pain.—*Deut. Medizin-Zeitung*, No. 66, 1891.

YEAST IN ENTERIC FEVER.

M. de Bavay's paper read before the Melbourne and South Australian Branch on the action of yeast on the typhoid bacillus contains an account of experiments in the intestinal canal of the human subject, he believes that he has been able to obtain a set of conditions under which the development of the typhoid organism is materially interfered with, whilst such poison as it does secrete is so utilized by absorption from the alimentary canal as to confer an immunity against the action of the more virulent poison. It will be remembered that in 1887 Dr. J. B. Buist brought forward a method of yeast inoculation against the action of small-pox; but his experiments at the time were not convincing, and, though undoubtedly exceedingly interesting, they were not, we believe, attended with any practical result. We shall now await with interest medical reports on the results of M. de Bavay's treatment, as only actual confirmation of the theory here put forth can enable any definite opinion to be pronounced. Those who heard the paper read at the meeting of the Melbourne Branch were apparently considerably impressed with a sense of its importance, and certainly both the argument and the work seem to have carefully carried out.—*Brit. Med. Jour.*

MEDICINE.

SPONTANEOUS SHEDDING OF THE NAILS IN DIABETIC PATIENTS.

Prof. Auché *Rivista Clinica e Therapeutica*, No. 4, 1891) communicates the results of his studying the development of this phenomenon in diabetic patients. First a hæmorrhage takes place into the tissue beneath the nail which, according to its amount, detaches the nail more or less extensively from

its bed. If the hæmorrhage be but slight, there appears a small and reddish film; if more abundant, the nail is raised from its bed, remaining attached only at the extreme lateral borders, until a new nail forms when the old nail is cast off. The writer is inclined to regard the spontaneous hæmorrhage as due to lesions of the peripheral nerves. His conclusions are as follows:

1. Diabetes mellitus, like tabes dorsalis, hysteria and various other affections, may, and often does, cause spontaneous shedding of the nails of the hands and more frequently those of the feet.

2. Shedding may take place in two manners. In certain cases the hæmorrhage and detachment occur without any preceding symptoms or disorder, when the diagnosis between syphilis and locomotor ataxia would be without the aid of concomitant symptoms, extremely difficult. In other cases subungual hæmorrhage may precede detachment. In such cases, the mechanism is similar to that observed in certain tabic patients.

3. These hæmorrhages are not only due to changes in the vessel walls, but also, in some cases, to lesions of the nerves found in the fingers.

MENIERE'S VERTIGO AND THE SEMICIRCULAR CANALS.

The experiments of Flourens, which seemed to attribute to the semicircular canals the *role* of maintaining the equilibrium of the body, have been controverted by others to such an extent as to make it appear doubtful whether that part of the labyrinth is the seat of the lesion which determines the so-called vertigo of Ménière. The peculiar character of the vomiting, the fact that the latter symptom may occur suddenly without nausea, after irritation of the membrana tympani, the intimate connections between the pneumogastric and the auditory nerve at their origin, renders it more probable that the vertigo and cardiac symptoms are due to a reflex action in the pneumogastric dependent upon a lesion in some portion of the auditory nerve. The term Méniére's disease serves more frequently to mark ignorance of the lesion which occasions a series of symptoms often analogous but which are under the influence of very different causes. —Sir Wm. B. Dalby, *Brit. Med. Journal*, and *Annales des Maladies de l' Oreille*, etc., vol. xvii.

Koch is Still at Work on Tuberculin, and hopes to make it gradually less and less deadly.

EXAMINATION OF THE EYES OF THE INSANE.

M. Roget (of Lyons) states that there exists in the greater part of the general paralytic a characteristic rigidity of the pupil. Besides excavation of the papilla, quite frequent in the normal state, should be regarded as the rule in those hereditarily predisposed, and in the insane who exhibit evidences of suicide. Finally, idiots and imbeciles, in respect to visual function, may be classed in two categories: The hypermetropic idiots are those whose infirmity dates back to uterine life; on the contrary, emmetropic and myopic idiots have become demented since infancy.

ARTIFICIAL NEURASTHENIA.

Dr. Von Pelizarva (*Deutsche Med. Woch.*) describes a condition which he has observed to come on in a patient undergoing the water treatment at mineral springs and to which he has applied the name of artificial neurasthenia. This condition has frequently been described as bath or spring fever, but the author of the present article says that it is undoubtedly a form of nervous disturbance resulting from the indiscriminate use of the bath and drinking of the mineral waters.

It is well known that there is a great difference in individual ability to react from certain shocks. At one time reaction from a cold bath would be prompt, at another there will be distinct loss of control of the will, shrinking and so forth, followed by depression and weakness. When such results obtain and the baths are persisted in the process will undoubtedly cause lessening of the resisting power of the nervous system. When it is remembered how great is the number of people ordered to the baths by physicians and how many go on their own account and take a regular course of treatment, in spite of the discomfort it may cause, it is not to be wondered at that patients return with neurasthenia or an exhaustive neurosis. The condition is soon established and it is for this reason that the author urges upon medical advisers sending patients to the springs, and also upon the physicians attending there, greater care in the selection of cases destined to undergo regular treatment. Due to the lack of the necessary foresight in this regard, Carlsbad, and Kissengen are prominent sites for the promotion of this form of nervous artificial neurasthenia.

SYPHILITIC DISEASES OF THE SPINAL COLUMN.

Dr. Jasinski (*Archiv. für Derm. und Syphilis*, No. 3, 1891) maintains (1) that syphilis of the spinal column occurs under the forms of periostitis, ostitis gummosa, caries, exostosis, and necrosis; and (2) that it is a relatively very rare affection when diagnosis is established beyond a doubt.

A number of personal cases are reported, one of perispondylitis syphilitica; one of gummous inflammation of the periosteum and bodies of the cervical vertebræ, which was cured by immobilization, with a plaster-of-Paris dressing, and inunctions combined with large doses of iodide.

Several instances of spinal affection in children are given and the literature of the subject is reviewed at some length.

THE ORIGIN OF EFFUSIONS.

Dr. G. Pisenti (*Riforma Medica*, June 12th, 1891) describes an experiment which serves to explain several points as to the origin of effusions. The method is simple, and one which can be easily demonstrated in the course of a lecture on pathology. The only preparation necessary is the following: A rabbit or guinea-pig is fixed in the retention apparatus, anæsthesia being produced either by ether or chloroform. An incision is then made along the linea alba about 4 inches long, so as fully to expose the abdominal cavity. The intestines are then raised and turned over to the left, thus exposing the portal vein, into which a cannula is tied. This cannula is next placed in communication with a reservoir containing either pure defibrinated blood, a mixture of blood and saline solution, or simply saline solutions (0.75 per cent.) The liquor should be kept warm, and the pressure measured by means of a manometer. The costal arch is then raised so as to expose the upper surface of the liver, and the artificial circulation is commenced under a pressure of about 2 mm. of mercury. In a few moments pale areas appear on the surface of the liver, which continue to increase as long as the circulation is maintained. If pressure be then raised a curious phenomenon is observed: numerous small drops of liquid exude through Glisson's capsule, and after a time run together, so that the surface of the liver becomes bathed in liquid. The rapidity of the exudation depends upon the pressure at which the artificial circulation is maintained. (1) There has thus been produced a true œdema from stasis, for supplying more liquid than can be removed by the efferent vessels, all the effects of a block in the circulation are reproduced, this effect increasing with any increase in pressure. (2) The same method can be used to demonstrate the production of exudation due to hydræmic plethora; by introducing simple saline solution all the effects of a hypo-albuminous condition of the blood can be obtained. In this case the effect on a single organ, the liver, will be similar to that produced on the entire body by the intravenous injection of large quantities of saline solution. It serves well to explain the origin of the acites so often seen associated with a watery condition of the blood. (3) It is well known that some tissues are more prone to œdema than others, and this is also illustrated by the above experiment, for of all organs that might be used the liver is that in which the phenomena can be best seen. It would appear, then, that the walls of its vessels are less resistant than those of other organs to the passage of liquids. (4) Lastly, from the rapidity with which exudation commences, it may be concluded that this can happen without any alteration of the vessel walls themselves, and this in opposition to the view held by some that exudation cannot take place without initial vascular lesions. To summarize, this experiment of Dr. Pisenti demonstrates (*a*) that increase of intravascular pressure plays an active part in the production of exudations (exudation of stasis); (*b*) that exudation may arise from alteration in the consistence of the blood (exudation from hydræmia); (*c*) that the histological constitution of the vascular walls varies from tissue to tissue, and from organ to organ; (*d*) that exudation may take place independently of any alteration in the walls of the vessels.—*Brit. Med. Jour.*

GOITRE—ITS PATHOLOGY, DIAGNOSIS AND TREATMENT.

Berry (*British Medical Journal*, June 13, 20 and 27, 1891) has made an extremely clear and valuable contribution to the subject of goitre.

He makes five varieties: (1) parenchymatous, (2) cystic, (3) fibro-adenomatous, (4) malignant, and (5) exophthalmic. All these varieties, except the last, which stands alone, clinically and structurally, run very much into each other, so that mixed forms are common.

From an extensive study of the probable causes of goitre, Berry concludes that its co-

incidence with limestone and calcareous sandstone districts everywhere in England is so marked that its appearance as an endemic disease in non-calcareous regions is doubtful. All attempts to produce goitre artificially have failed, from the experiments of St. Lager to those of the present day. Animals drinking solutions of the different forms of salts found in water from these regions, have never shown any sign of goitre, although goitre is common in lower animals in goitrous districts.

Yet the fact that goitre can be produced by water has been proved accidentally from human experimentation. For example, in a regiment of young soldiers, quartered in a goitrous village, there developed, in a large proportion of the men, goitres in a few months or even weeks. Again, a town has has received a new water supply, and shortly afterward goitre has broken out in a large number of the inhabitants. Conversely, a village afflicted with goitre has been relieved of that disease by changing its water supply.

There are "goitre-wells" on the continent, to which young men, who wish to be exempt from military service, resort; after drinking this water for a few weeks, they obtain goitres sufficiently large for them to obtain their wish.

Mere hardness in the water does not cause goitre. Berry believes that there is a definite relation between goitre and some poison in the soil, which is carried by drinking water. This may be some mineral ingredient, possibly a salt of some alkali or alkaline earth. From personal experiment he believes that it is not a salt of lime, magnesia or iron. Want of air and sunshine, climatic and atmospheric conditions, heredity, habits and intermarriage, have apparently no share in the causation of goitre.

The effect of goitre on the duration of life is small. In some cases pressure on the trachea causes death. Again, if bronchitis or some similar disease intervenes, the patient has a much smaller chance of recovery.

In regard to the treatment of goitre, the author believes that injections of various substances to excite sufficient inflammation to obliterate the vesicles of the gland, or to have some solvent action on the colloid contents, is not devoid of danger. Iodine is far preferable to every other substance; yet its injection has been followed in a number of cases by death. Internal administration of remedies is briefly discussed and dismissed. The use of setons was wisely abandoned long ago.

A noteworthy series of cases has been reported by Rydygier, of Cracow, in which ligature of the superior and inferior thyroid arteries on both sides has been performed. In sixteen cases the results were excellent, although the operation is a difficult one, and the patients have not been watched for sufficient time. Cystic or fibro-adenomatous goitres are less likely to be benefited by such ligation. Division and resection of the thyroid isthmus have been less successful; the operations have been followed by death in some cases, or the dyspnœa, for relief of which the operation was done, was unimproved. Total extirpation of the gland is not recommended on account of its grave dangers. Partial extirpation has been done by Berry, frequently with good results. *Mukulicz's resection*, which consists in removing the chief part of a lateral lobe, avoiding the recurrent laryngeal nerve by leaving the portion of the gland adjacent intact, has the advantage that it leaves sufficient gland tissue to prevent cachexia strumipriva, avoids hæmorrhage and injury to the recurrent laryngeal nerve, and removes the capsule of functionally useless gland tissue. There has never been a return of the goitre in the portion of gland in twenty-three cases operated on according to Mukulicz's method, nor impairment of health, although one case died of recurrent hæmorrhage and one required a tracheotomy.

In 550 cases of partial thyroidectomy only six present symptoms of cachexia strumipriva; five of these recovered and one died. In cases of cachexia strumipriva, transplantation of thyroid tissue, as done by Kocher, Horsley and Fenwick, can be tried. Pilocarpin, jaborandi and nitro-glycerin should be of service. In malignant goitre no operation but tracheotomy is advisable. Kocher has reported the results of 250 consecutive operations on goitre, with a mortality, if malignant and exophthalmic goitrous disease be eliminated, of 0.8 per cent. Cachexia strumipriva is the most important remote effect of thyroidectomy; the existence of this remarkable affection, following the operation, was drawn to the attention of the profession in 1883; its recognition had a great effect in modifying views held in regard to thyroidectomy. Berry believes it can be avoided by performing partial thyroidectomy.—*Univ. Med. Mag.*

CLINICAL STUDY OF THE CONDITION OF THE HEART IN TYPHOID FEVER.

Dr. L. Galliard, (*Archives Générales de Médicine*) took careful notes of the anomalies in the condition of the heart during an epidemic of typhoid fever in Paris, in 1880, while he was interne under Professor Hayem in the Saint Antoine Hospital. He had delayed publishing the notes, as he had hoped to have made further investigations on the subject, but circumstances prevented him, he simply gives the clinical notes of the cases as they were taken at the time.

The first case was one of sudden death at the end of the first week of the disease. The patient was progressing favorably, the temperature 37.8° C. in the morning, and 40.2° C. in the evening, when he became delirious, and after a short time died. No cause could be found in the *post mortem* examination to account for the death.

The second case was one of collapse on the thirteenth day. There had been profuse diarrhœa, and the temperature from 39.5° C. on the eleventh day, gradually sank to 36.1° C. in the armpit, and 37.4° C. in the rectum on the thirteenth. He presented all the appearance of a cholera patient, with cold extremities, livid face, almost pulseless, and no heart sounds to be heard. Under stimulating treatment he gradually recovered.

The third and fourth were cases of non-rhythmical intermittence of the pulse, the third exhibiting the intermission only on the day of entry [the eighth of the disease]. There was a murmur [systolic?] at the apex and at the base of the heart. In the fourth case, the intermissions continued from the 8th to the 24th day. There was slight albuminuria.

The fifth was an anæmic girl, in whom rhythmical intermissions occurred after defervescence—from the 24th, and lasting three weeks. There was also systolic murmur at the apex and in the pulmonary area. In the sphygmographic tracings there occurred an occasional double pulsation. The patient had also a slight relapse.

The sixth case was at first simply asthenic, with feebleness of the apex beat, and of the heart sounds. There were intermissions on the 24th day when the fever was abating. Pneumonia ensued, and the patient died. There was myocarditis.

The seventh case had untractable diarrhœa. At the end of the third week there was feebleness of the heart and faint first sound. Later, at the apex, the first sound could scarcely be perceived while heard distinctly over the sternum. There was also inequality and irregularity in the pulse beat. The patient died suddenly about the end of the fourth week. Myocarditis and vitreous degeneration of the voluntary muscles were found.

In the eighth case there was systolic murmurs at the base and apex observed on the eighth day of the disease, disappearing on the tenth from enfeeblement, and the patient died on the twelfth. There was myocarditis.

The ninth case was somewhat similar to the eighth.

In the tenth there were anæmic murmurs that persisted after recovery and the author points out the necessity to distinguish anæmic murmurs from murmurs arising in cases of myocarditis.

The next three cases are examples of the true cardiac form of typhoid fever. There is a general resemblance in all these cases—intermissions of the heart's action coinciding with the murmurs, or following on the disappearance of the heart's sounds, and feebleness of the apex beats. Towards the end the heart's action becomes irregular, accompanied by tachycardia, and is premonitory of a fatal termination, and finally syncope, preceding death. There were also complications in the lungs, kidneys, nervous system, etc. In the three cases given myocarditis was demonstrated in each one.

The last two cases of endocarditis, the murmurs appearing in the one case on the eighth day, and persisting after recovery, and in the other case acute endocarditis was diagnosed before the symptoms of typhoid fever developed, the murmurs persisting here also after recovery.

The author concludes with a few remarks on the causes of the cardiac phenomena, pointing out that, in addition to the local mischief, affections of various nerve centres would account for some symptoms. In treatment, he strongly recommends the judicious and bold use of digitalis.

SURGERY.

ARTHROTOMY IN OLD LUXATIONS.

V. Vaurossy (*Wien. klin. Woch.*, 1890, No. 50). V. reports from the Innsbruck clinic nine cases of old elbow luxations, and one each of shoulder and metacarpo-phalangeal of the thumb. The elbow luxations consisted of backward dislocation of both of the forearms. Either the external or internal epicondyle, or both, as in one case,

served as barriers to reduction by being forced into the joint. The longest duration of the luxation was twenty-four months. The younger the individual and the luxation, the more favorable the prognosis. The cartilaginous covering of the articular extremities of the bones suffers less in young individuals, in case of luxations of long standing, than in olders ones.

In performing arthrotomy in these cases, the joint was opened from both sides. The author, as a result of his experience, declares that by means of arthrotomy a much better result is reached than by a most economically planned resection. Subcutaneous separation of the intra-articular bands which form in these cases the author declares to be entirely insufficient.

MODERN RENAL SURGERY.

Dr. A. Obalinski sums up his views regarding the treatment of severe inflammatory affections of the kidneys and their sequelæ in the following way: 1. Suppurative inflammation of the kidney and surrounding structures indicates the operation of nephrectomy in order that free exit may be given to the purulent and other inflammatory excretions, and that the focus of the diseased may be thoroughly cleansed, and further extension of the suppuration to important parts, as, for example, the thoracic and abdominal cavities and the hipjoint, be thus prevented. In most cases the single lumbar incision, as was performed by Simon, will suffice, but when there has been extensive undermining of the peritoneum the formation of a large flap, as practiced by Bardenheur, is to be preferred, as such operation permits of ready access to all extensions of the main pus-containing cavity. 2. Urethral fistulæ should always be treated by removal of the corresponding kidney, provided the surgeon can assure himself of the existence of a sound renal organ on the other side. Nephrectomy in such cases is indicated, not only on subjective grounds and when, for instance, the external flow of urine cannot be restrained by any apparatus and the patient is thus prevented from following his occupation and from enjoying a comfortable existence, but also on objective grounds, since, notwithstanding the utmost precautions, an old ureteral fistula may result in suppurative inflammation of the corresponding kidney and of the adjacent soft parts. 3. Nephrectomy performed under these last mentioned conditions offers much less favorable prospects than in cases in which there is an absence of suppuration or of cicatricial adhesions. 4. There can be no doubt that, under equally favorable conditions, the transperitoneal method can be performed more rapidly and with greater ease than the extraperitoneal method of nephrectomy, and that the progress toward recovery is more speedy after the former operation. The transperitoneal method, however, is not applicable to every case, and should be reserved for those instances in which the mischief is confined within the capsule of the kidney, the extraperitoneal method being indicated when the suppurative process has involved the perirenal structures.— *Volkmann's Sammlung Klinische Vorträge.*

RESECTION OF THE SKULL IN TRAUMATIC EPILEPSY.

Dr. A. Garibaldi (*Gazz. degli Ospitali,* October 4th, 1891) reports the case of a man, aged 23, who, ten years previously, had fallen from a considerable height on his head, sustaining a compound comminuted fracture of the skull in the right frontoparietal region. After this accident he became subject to epileptic attacks; these were at first partial, starting from the left leg, particularly the flexor muscles; during them the man was dazed, but did not lose consciousness. The attacks gradually became more frequent, until they occurred two or three times a week. On examination an irregular cicatrix was found on the right side of the skull directed obliquely from without inwards, from below upwards, and from behind forwards. The scar was about 8 centimetres in length, and at its middle part about 3 in breadth; at this point irregular bony prominences and depressions could be felt. On measurement the scar was found to correspond to the upper part of the prerolandic convolution and the first and second frontal convolutions. On April 29th, 1891, Dr. Garibaldi operated. He first removed the whole of the bony cicatrix, resecting with the scalpel the cranial bones around the scar, and in this way making a breach in the skull of about 4 square centimetres in extent, and exposing the dura mater over the whole area. In the anterior part of the wound a swelling rather larger than a hazel nut, and containing serous fluid, was opened. There was a little hæmorrhage from the diploë and the dura mater on breaking down some adhesions; with this exception there was no complication. The operation was performed with the strictest

antiseptic precautions. Recovery took place without interruption; the wound healed almost entirely by second intention, as the skin flap, which consisted of old cicatrical tissue, partly sloughed. At the date of the report the cicatrix was fibrous and resistant. With regard to the fits the result was only moderately satisfactory. With the exception of a slight attack, which occurred the day after the operation, there were no further seizures until May 22nd, when general convulsions occurred twice. On the following day the patient complained of cramps in the lower limb, and on the night of June 5th another attack occurred, which was followed by headache. On June 30th and again on July 5th he had attacks during the night. On July 15th one took place during the day, and other attacks occurred at the end of the same month and at the beginning of August. The patient cannot, therefore, be considered cured, and there is little hope of much further improvement as time goes on.—*Brit. Med. Jour.*

THE TREATMENT OF VARICOLA.

According to Dr. Landerer, the extirpation or obliteration of varicose scrotal veins is apt to be followed by relapses. In one of his cases of recurrence he obtained an excellent result by letting the patient wear a hernia truss with movable pad, according to the method of Ravoth. One and a half years after application of the truss the varix had disappeared completely, and after wearing it for a year longer it was left off, and since eight years, there has been no return of the varicocele. An equally successful result was obtained in three other cases. The truss probably acts as an artificial substitute for the valves of the veins which have either completely disappeared in the varicosities or are in a rudimentary condition. This procedure is also applicable to varices of the lower extremities. For this purpose the author makes use of an apparatus consisting of a curved spring and a pad filled with water, which is made to press directly upon the saphena vein. He has employed this truss in eighty cases with very satisfactory results. Its application is much more agreeable to the patient than bandaging, and then it is much cheaper than an elastic stocking. Under the use of the apparatus a reduction in the size of the limb has been observed, but the treatment must be regarded as palliative rather than curative.—*Deut. Medizinal-Zeitung.*

MECHANISM OF FRACTURES IN THE DORSAL AND DORSO-LUMBAR REGION OF THE VERTEBRAL COLUMN.

In *L'Union Medicale*, July 2, 1891, Dr. J. Ménard gives the following conclusions:

(1) Indirect fractures are most common and are produced by forced flexion.

(2) There is first a sinking, then tearing, then breaking, the last often independent of the tearing.

(3) Simple sinking, constantly found in dorso-lumbar region, is not known in dorsal region.

(4) Breaking more frequent in dorsal; the tearing exists in both regions.

(5) Ordinary cause of dorso-lumbar fractures arise from falls upon the seat of lower limbs; more rarely from bodies pressing on the nape of the neck and top of back, with flexion of trunk.

(6) Dorsal fractures from falls on the nape of the neck or from flexion caused by pressure on nape of neck, and top of back—the trunk being vertical.

(7) With dorsal fractures, there are almost always fractures of the ribs, sometimes of the sternum.

(8) Compression of the cord generally caused by the posterior superior border of the inferior fragment of the body of the vertebra.

(9) The indication is to reduce and maintain reduction for a sufficient time.

(10) Trephining is seldom indicated and should be reserved for mixed fractures and crushings of the posterior arch.—*Univ. Med. Mag.*

AN OPERATION FOR TETANOID CONVULSIONS.

The *Centralblatt für klinische Medicin* refers to a case of Mr. T. R. Ronaldson's, recorded in the *Edinburgh Medical Journal*, in which a perfectly healthy child was attacked with tetanus on the eleventh day after birth. The birth had been a normal one, except that the child had a very thick umbilical cord. On examination, the stump was found discolored and foul-smelling. Symptoms of inflammation had not been present. Frequent washings with a corrosive-sublimate solution was carried out and everything was done to prevent a recurrence of the convulsions, but without avail. On the twenty-third day the author performed excision of the navel, with the result of the gradual diminution of the frequency of the attacks. By the end of the seventh week the convulsions had entirely disappeared

and the child was restored to perfect health. There was no micro-organisms found in the excised umbilical stump.

LAPAROTOMY FOR WOUNDS OF THE LIVER.

Broca (*Le Mercredi Medical*, 1891, No. 29) reports two cases of wound of the liver, each treated by surgical intervention, and each terminating fatally.

The first patient was seen six hours after the infliction of the stab wound. He exhibited the symptoms of large hæmorrhage. The wound was enlarged; the source of bleeding was found to be the liver; blood was flowing freely from the incision upon the anterior surface of this organ. An attempt to suture this wound proved futile, the threads tearing through. Thermo-cautery also failed to check the bleeding; an iodoform tampon was, however, entirely successful. An hour was consumed in the operation.

The patient perished two days later of abdominal septicæmia.

At the autopsy several other wounds were found, in some of which there had been bleeding after operation.

The second case was also a stab wound. The patient was seen four hours after the injury, and presented all the symptoms of intra-peritoneal hæmorrhage. The abdomen was opened and a non-penetrating and penetrating wound of the stomach were found. A wound three inches long was observed on the lower surface of the liver. By means of a silk suture this wound was closed and the bleeding ceased. The patient died in a few hours with symptoms of continued hæmorrhage.

At the autopsy it was found that the knife had passed completely through the liver, the wound of exit being located on the upper surface of this organ one-fifth of an inch behind the suspensory ligament. From this source sufficient blood flowed to entirely fill the pelvis.—*Amer. Jour. Med. Sci.*

AN IMPROVED METHOD OF GRAFTING ULCERS.

Dr. Gill in a letter to the *Lancet*, says that having had an exceptionally large number of chronic ulcers of the leg, which incapacitated the patients from work, and finally brought them into the infirmary, he tried the ordinary methods of grafting, but being disgusted with the very large number of total failures, he experienced, he undertook various experiments, and at last adopted the following plan, which he distinctly disclaims as his own, but which consists in adopting and combining the ideas of several people. The success he obtained with this method was so marked that he thinks a large number of practitioners at home and abroad (in India especially, where he found all ulcers very intractable under ordinary treatment) will welcome it. Even when the ulcer is deep, with hard thickened edges and extending all around the limb, the method applies. This is to cleanse the surface well for two or three days with boracic fomentations, and then (contrary to what he was taught) slightly abrade the granulations, just sufficient to cause oozing, and apply the graft directly to the abraded surface, where it is held in position by a small pile made of half-inch squares of green protective, four or five squares being placed one on the top of the other. A graft is thus applied to every square inch of surface. And now comes the most important thing of all, and which is an idea he received from a friend. This is to encircle the limb with a fold of carbolic gauze, which extends two or three inches above and below the ulcer, where it is attached to the sound skin by collodion. The ulcer is then thoroughly dredged with boracic powder through the gauze, and the whole is wrapped in a layer of wet boracic lint, which is kept thoroughly moist. As a rule, the dressing is not disturbed for three days, when the lint is removed, and the limb, well irrigated with boracic lotion, the grafts remaining perfectly secure under their heaps of protective, which again is kept in position by the gauze. The limb is then redusted with boracic powder, and done up in the wet lint, which is now changed daily. At the end of ten days the gauze and protective are removed, and each graft will be found as large as a sixpence, while those near the edges will have exercised a spermatic influence, and caused a rapid ingrowing of epthelium. Since adopting the above plan Dr. Gill says that he has never lost a single graft, though employed on most unfavorable surfaces—a very different result to the old way of covering the grafts with a large piece of protective which retained some exudations under it, and thus bathed the tender graft in a poisonous medium, with a result that 80 per cent. of them never "took."

IODINE WATER AND ARISTOL AS SURGICAL ANTISEPTICS.

Popoff speaks very highly of the antiseptic effects of irrigations with iodine water

(1 to 10,000), and consecutive powdering with aristol (pure or in a form of a 20 per cent. mixture with boracic acid) in cases of tuberculosis of joints (fungating arthritis, etc.) and bones, callous syphilitic ulcers, simple chronic ulcers, angina Ludovici, phlegmon, furunculosis, wounds of every description, etc.* The iodine lotion also gives excellent results in inveterate ozæna. In addition to its powerful antiseptic properties it has a decided astringent and hæmostatic action. Under its use luxuriant and profusely bleeding granulations rapidly assume a normal appearance, cease to bleed, etc. The iodine water likewise speedily checks parenchymatous hæmorrhage from any recent wounds.

CONCERNING THE TIME AND CAUSE OF THE EXTENSION OF GONORRHŒA TO THE PARS POSTERIOR URETHRÆ.

After an examination of fifty cases of first infection of gonorrhœa, Dr. Ignatz Heisler, (*Archiv. für Dermatologie und Syphilis*, 1891, 5 Heft.) concludes:

1st. That posterior urethritis appears much earlier than is usually taught and accepted by the best writers.

His statistics show that in twenty per cent. of the cases it appeared in the first week, in thirty-four per cent. in the second week, and in fourteen per cent. in the third week after the appearance of the discharge.

2d. Constitutional affections, especially syphilis, have little influence in hastening the occurrence of posterior urethritis, although the affection occurs more frequently in syphilitic subjects.

3d. Occupations which necessitate long-continued exertion play an important role in expediting affections of the deep urethra.

4th. The affection is equally prevalent whether injections are used or the treatment be confined to internal medication.

5th. The musculus compressor urethræ has no power to prevent the transference of the infective agent to the deep urethra.

6th. The gonorrhœal inflammation of the anterior urethra cannot be regarded as an affection of such typical course as is asserted by the majority of authors, *i. e.*, an inflammation starting in the fossa navicularis, reaching the bulb in three weeks; then, when the acme of intensity is attained, passing over to the posterior urethra. In the great majority of the cases, this happens during the first or second week without the direct transference of the gonorrhœal pus by means of catheters or sounds.

It must therefore be looked upon, not as a complication of anterior urethritis, but as a direct continuation of it.

SUTURING OF NERVES.

Th. Köllker (*Deutsch Chir.*, 189, Liefg. 246, Stuttgart, Ferd Enke, 1890). The discussion of the interesting question of primary union of divided nerves, as well as the processes of degeneration and regeneration, is entered into in connection with the subject of nerve suture and operations upon nerves. The author's researches, to be published later, show, contrary to Friedländer and Krause, degeneration of all of the fibres of the peripheral nerve stumps, the latter, according to Kölliker taking no active part in the process of regeneration, but simply serving as a guide for the newly-formed nerve fibres in their passage from the central nerve stump to the periphery. Immediate contact of the severed axis cylinder may possibly lead to immediate union of the same, but there is no indubitable evidence of this having occurred. Union by formation of a small amount of new-formation tissue, with the development of nerve fibres as demonstrated by the microscope, without degeneration of the distal ends of the nerves, according to K., has occurred.

In suturing nerves, Kölliker does not employ one method to the exclusion of the rest. In cases in which the ends can be brought together only after considerable force, the direct method is indicated; in cases in which there is no tension, the indirect plan is adopted. Silkworm gut, or catgut, is employed as a suture material. In cases in which there is a deficiency to the extent of 4 ctm., due to removal of a section of the nerve, he recommends stretching the nerve to fill the gap, and subsequent suturing. In cases of a more considerable gap, Vanlair's method of tubulization, or union by means of catgut loops, is preferable to nerve transplantation. In cases in which the central end of the injured nerve cannot be found, implantation of the distal end to a neighboring nerve is recommended. This method of "neurotization" whereby the distribution to a distant part is effected through the medium of a nerve trunk not originally destined for this purpose, promises to be a valuable aid in cases otherwise hopeless.

The Debility following Influenza is said to be greatly benefited by anacardium occidentale (cashew nut).

GYNÆCOLOGY.

NOTE ON THE VALUE OF IGNIPUNCTURE IN THE TREATMENT OF HYPERTROPHIED CERVIX UTERI.

Dr. Alexander Duke, writes in the *Lancet* that the length of time occupied by the usual routine treatment of a case of chronic hypertrophied cervix uteri can be considerably shortened by the judicious use of ignipuncture. The usual plans of treatment—viz., tampons of glycerine, copious syringing with very little hot water, painting cervix with Churchill's tincture of iodine, etc., —occupy a very considerable time, which prolonged treatment (unless the patient is able and willing to pay for) "is more honored in the breach than the observance." Superficial firing by caustics or smouldering pieces of carbon held in contact with cervix by forceps is not sufficient in well-marked cases of chronic hypertrophy to obtain the desired result within a reasonable time. Having observed the good effects on enlarged tonsils by the employment of ignipuncture, he has given it a trial, and can strongly recommend it as a useful adjunct in these cases. A thermo-cautery of small size and point (Paquelin's) will be found the best for the purpose, but those who do not possess this valuable instrument can obtain equally good results with a copper rod, sharp at the point, and with solid bulb about half an inch from the top, so as to retain the heat while the necessary number of punctures are made through a wooden or celluloid cylindrical speculum. This cautery can be heated with an ordinary spirit lamp till red-hot, held in the tissues for a few seconds, while each puncture, about a quarter of an inch, is made, and then withdrawn. There should be no bleeding observable if the operation has been properly performed, such being caused by the cautery being either too hot or too cold. His usual practice is to blow a little boric acid (with his vaginal insufflator) over the punctured surface, and make no examination for about a week, when the operation can be repeated if necessary. He has also found ignipuncture of great value in lacerations of the cervix when hardly bad enough to demand Emmet's operation. Little pain, if any, is produced unless the operator is unwise enough to allow the patient to observe the preliminaries.

A Faculty of Medicine is about to be established in Constantinople.

REMARKS ON A SERIES OF ONE HUNDRED LAPAROTOMIES.

Ten years ago to-day, Dr. Joseph Taber Johnson says, he performed his first laparotomy on a lady completely broken down, mentally and physically, on account of menstrual epilepsy. When he heard from her last, she was alive and doing well—not a "brilliant cure in sixteen days," but so much improved as to induce her to write that she and her family were very glad the operation had been done.

His next case occurred two years later; she also recovered. His next three cases died. None of them suffered from the four principal causes of death following laparotomy—shock, hæmorrhage, peritonitis, or sepsis. But still, he began at once to study over again his abdominal surgery, and in the hope of doing better work in future, took lessons from the best operators across the ocean, as well as in our own country. He saw Tait perform twenty-three abdominal sections. He studied the methods of Keith, in Edinburgh, Bantock and Thornton, in London. He had previously seen Sir Spencer Wells operate.

He saw operations under clouds of carbolic spray, and without spray. He saw every detail and variety of antiseptics used, and other operations, equally, if not more successful, where only "surgical cleanliness" was observed. He made many trips to New York, Philadelphia, and Baltimore upon invitation and toleration to study the methods of our most successful abdominal surgeons, in all witnessing and assisting, where he could, in at least two hundred laparotomies for a great variety of conditions.

After this increase of experience with men and methods, he had a run of 25 ovarian operations without a death; the twenty-sixth case died. Another run of fourteen cases without a death; the fifteenth died of tetanus the fourteenth day after the operation. Another run of thirty-three cases without a death—making a new series of seventy-three ovarian operations, with seventy-one recoveries and two deaths. The first series of five cases had three deaths.

In this report of 100 consecutive laparotomies, he only proposes to discuss, briefly, the value of surgical interference in some of the different groups of cases embraced in the accompanying table.

Laparotomy was done for the—

Removal of uterine appendages, ...	42	times with	3 deaths.
Ovarian tumors, . . .	37	"	2 "

Uterine fibroids, supra-vaginal hysterectomy, . .	12	"	4	"
Cæsarean section, . . .	1	"	1	"
Hydro-nephrosis (74 lbs),	1	"	1	"
Exploratory laparotomies,	3	"	0	"
Universal cancer, . . .	1	"	1	"
Ruptured tubal pregnancy (supposed), ...	1	"	1	"
Chronic peritonitis, . . .	1	"	0	"
Laparotomy for abdominal dropsy, ...	1	"	0	"
	100	"	13	"

HYDRASTININ IN METRORRHAGIA.

Falk (*Centralblatt für Gynekologie*, No. 8, 1891.) has found that hydrastin is a heart poison, while hydrastinin is not. The latter has the advantage over hydrastin of producing considerable and regular vascular contraction. This conclusion was based upon the results obtained from treating twenty-eight cases of metrorrhagia from hyperplastic endometritis, congestive dysmenorrhœa and metrorrhagia accompanied by vertigo. In the former the metrorrhagia diminished. The chloride of hydrastinin, in a 10 per cent. solution in water, in doses of 5-10 cgr. (1–1½ gr.) is the preparation employed. It should be especially used before and during the time when hæmorrhage occurs.

OBSTETRICS.

HYPEREMESIS GRAVIDARUM, PTYALISM AND HYSTERIA.

Ahlfeld (*Centralbl. f. Gyn.*, No. 17, 1891). Kaltenbach in a recent paper has called attention to the frequency with which the hyperemesis of pregnancy occurs in hysterical patients and to the fact that the therapeutic measures which prove most successful in the treatment of hysterical manifestations have a favorable influence in the former affection. Yet he does not claim that the pernicious vomiting of pregnancy can be directly traced to hysteria. The author has met with several cases in which hysteria was the principal foundation of the uncontrollable vomiting. He regards both the hyperemesis and ptyalism of pregnancy as nothing more than an exaggeration of the reflex neurosis common in pregnancy in many women. His management of these cases is precisely the same as in hysteria uncomplicated with pregnancy. He enforces rest, forbids intercourse with friends and prescribes all mental excitement. His results he claims substantiate his doctrine.

Apropos of this question are the following remarks from the editorial columns of "Brit. Med. Journal" of May 30th, 1891:

This subject, of so deep interest to the practitioner, is at present occupying the attention of a large number of British and foreign obstetricians. Sixteen years ago there appeared in the journal the now celebrated paper by Dr. Copeman, which was read all over the globe, and gave his name to the "method" he advocated. Copeman's method simply means dilatation of the cervix with the finger. Undoubtedly it has proved of the highest service, whatever may be of the precise nature of its action. Dr Graily Hewitt, whose work on *Severe Vomiting during Pregnancy* appeared last year, traces the disorder to flexions, with inflammatory changes in the uterus. . . Other authorities refer the trouble to lesions of the cervix, and treat them with counterirritants. . . . There remains, unfortunately, the fact that in many cases nothing stops the vomiting save termination of the pregnancy. The induction of labor is not without risk; the practitioner is unwilling to resort to it when the vomiting has not lasted long, whilst later on the patient may be fatally enfeebled by constant sickness; hence the gravity of the entire question becomes self-evident. No wonder so much is written on hyperemesis graviadarum, but much more remains to be done before anything like a sound routine practice, suitable to others than hospital obstetricians of extremely specialized experience, is established to the benefit of humanity and the comfort of the practitioner.

PREGNANCY AND HEART DISEASE.

Dr. S. Remy (*Arch. de Tocol. et de Gynéc.*, August, 1891) publishes an instructive series of cases of death late in pregnancy from heart disease. The fatal event is sometimes sudden, taking place during work, dancing, or getting up. More often it follows asystolic phenomena. In the 15 cases collected by Dr. Remy the child was extracted, either by Cæsarean section or version, seven times; three were alive; in two of these three cases, if not in the third, death of the mother had been sudden. One fœtus extracted after "some delay" (precise length of time not being noted), was not quite pulseless when born. In cases of sudden death, the chance that the child may be living when the obstetrician acts promptly is considerable. When the mother has died from slow asphyxia due to asystolism, the child has

probably expired before its parent. In a case of this kind under Dr. Remy's own observation the child, promptly delivered by version, was beginning to macerate; it had evidently been dead for two days or more. The question of hastening delivery is grave. The actual birth of the child by premature delivery, when safely ended, leaves the woman for the time better off than before labor. Unfortunately premature labor in heart disease does not always improve the patient's condition. The cardiac and secondary lesions may be too serious to permit of more than the most temporary benefit. The labor itself places the patient for the time in extreme peril of fatal asystolism. Lastly, there remains a third fact, which may not be taken into account at the beginning of the case, when the induction of labor is contemplated. In lying-in patients with heart disease, severe cardio-pulmonary complications often set in on the third or fourth day after labor. Altogether it would appear best to induce abortion very early when cardiac disease, with grave complications, is present in a pregnant woman. Obstetricians may hesitate to take such a step, as they may wish to extract a viable child, and, as this involves some interval of time, the cardia symptoms may undergo some amelioration, or in some cases the child may die and be readily extracted. Hence it is hard to lay down a general rule; much must depend on the gravity of each individual case.—*Brit. Med. Jour.*

PREGNANCY AT THE AGE OF FIFTY-NINE.

Dr. E. Derasse (*Gazette Médicale de Liege*, October 1st, 1891) saw in his consulting room in August, 1889, a lady with a swelling of the abdomen. She was 59 years of age, and had been a widow for twenty years. The tumor was taken, by one of her medical attendants, for a uterine fibroid, and by another for a cyst. Arrangement had even been made for an operation. Dr. Derasse, on examining the tumor, which was uniform with the uterus, noticed a sensation as though something was moving inside it. On auscultation fœtal heart sounds could be heard; *ballotement* was also clear. The breasts were already well developed and heavy. After careful investigation of the case it transpired that the elderly patient had a young lover. On December 21st, 1889, she was delivered of a fine boy. She was then aged 59 years and 5 months, Dr. Derasse having succeeded in obtaining her birth certificate. She suckled her child well, and weaned it upon her sixtieth birthday. She stated that she had ceased to menstruate at 50 and she had a married daughter 40 years old. Dr. Derasse refers to the *Dictionnaire Encyclopédique* where several cases are recorded where mothers suckled their children at the age of 60, or even later.—*Brit. Med. Jour.*

PÆDIATRICS.

THE FREQUENCY OF INFANTILE CONVULSIONS.

Dr. G. L. Walton has found that out of 1,000 children, taken consecutively at random from all classes of society, 11.1 per cent. have been found to have a history of infantile convulsions. Among epileptics whose epilepsy did not begin in infancy, seven per cent. had infantile convulsions.

GONORRHŒAL STOMATITIS IN AN INFANT.

Professor Dohrn describes in the *Medicinische-chirurgische Rundschau* the case of a child, eight days old, which was brought to his clinic suffering with swollen jaws. A further examination showed the back of the infant's tongue and the roof of its mouth to be eroded and covered with a grayish-yellow exudation. An acute stage of purulent conjunctivitis being present, the mother was questioned as to the possibility of gonorrhœal infection, and her answers confirmed the suspicion of this being the source of the trouble. To be positive, however, a small portion of the diseased mucous membrane of the mouth was excised and submitted for microscopical examination, and numbers of gonococci were found. It was supposed that infection took place upon the abraded mucous membrane in the child's mouth, the mechanical injury having possibly been inflicted by the accoucheur.

ANTIPYRETICS IN CHILDHOOD.

R. Demme (*Jahr. f. Kinderhlkde*, Bd. xxxiii, H. 1 and 2) gives the results of experience with various antipyretics in the Jenner's Hospital in Bern. They were only given at all in cases in which the temperature exceeded 103° F. for several days; in milder cases cold applications or cold baths were employed (two baths daily at 77° to 82° F. for five or ten minutes). In articular rheumatism he gave sodic salicylate, or, if there was a tendency to vomiting and

diarrhœa, salol. Doses of salicylate, daily, 2 to 4 years, 7 to 15 grains; 5 to 10 years, 15 to 30 grains; 11 to 15 years, 37 to 45 grains—of salol, thrice daily, 2 to 4 years, 4 to 5 grains; 5 to 10 years, 8 to I2 grains; 11 to 15 years, 12 to 15 grains. In typhoid fever thallin sulf. was given every two hours; to a child 3 to 4 years old, ⅛ grain; 5 to 10 years, ⅓ grain; 11 to 15 years, ½ grain to ⅔ grain. In broncho-pneumonia with very high temperature (105° to 106°) he gives during the early stage hourly doses of antipin for two or three doses. Dose, 2 to 4 years, gr. iss to gr. iij; 5 to 10 years, gr. vij to xij; 11 to 15 years, gr. xij. to xv; larger doses are unnecessary, and may be dangerous. In the latter stage of broncho-pneumonia with hectic type of fever, quinine is superior to every other antipyretic. Doses, 2 to 4 years, gr. iij to vj; 5 to 10 years, gr. vij to viij; 11 to 15 years, gr. xij to xv. Antifebrin was found particularly useful in the high temperature of phthisis; like antipyrin, it sometimes caused a measly eruption. Doses, 2 to 4 years, gr. ⅔ to j; 5 to 10 years, gr. iss to gr. iij; 11 to 15 years, gr. iij to gr. ivss, once, twice, or thrice a day. Acetphenetidin was found a very satisfactory remedy, but had the disadvantage of causing sometimes copious sweats and frequently a measly eruption and cyanosis; it was best given in single large doses, 2 to 4 years, gr. iss to gr. iij; 5 to 10 years, gr. iij to vij; and 11 to 15 years, from gr. vij. A new remedy tested by Professor Demme was carbonyl-orthoamidphenol, or more shortly, oxycarbonil, an isomer of antifebrin which is excreted as oxycarbonil. As an antipyretic, it had to be given in larger doses than antifebrin, and its action was of very short duration, the temperature quickly rising again to the point at which it was before. Demme states that by repeating the dose every two hours, the temperature in typhoid may be kept down to 100° to 102° F.—*Brit. Med. Jour.*

TREATMENT OF DIPHTHERIA BY IRRIGATION OF SALICYLIC ACID.

In the *Bulletin Général de Thérapeutique* for September 15th, 1891, Dr. Parisot of Voyes publishes a paper in which he highly recommends irrigation of salicylic acid as a treatment for diphtheria. The former mortality of his cases was large (10 out of every 14); in a recent epidemic, when the new treatment was adopted, he had only five fatal cases out of every twenty-four, certainly a very satisfactory proportion for such a fatal disease. The formula which Dr. Parisot employs is as follows: Salicylic acid, one gramme water, 980 grammes; alcohol (90 per cent.), 20 grammes. The salicylic acid is dissolved in the alcohol, and the water added. The apparatus for irrigation is a fountain syringe, with the reservoir made of tin. This is hung against the wall over the patient. The rubber tubing, which is connected to a projecting nozzle at the lower part of the reservoir, ends in a small glass tube drawn out to a point. A spring catch on the tube controls the current of liquid. When the apparatus is filled with the solution the head of the child is held by an assistant, the tongue depressed, and the jet of fluid directed against the pharynx with sufficient force to detach and remove the false membranes. Several applications may be necessary to effect this, and if the membranes are not loose a little time must be allowed to elapse until this is the case. As regards the position of the head, Dr. Parisot recommends that this should be forward and a little downward. When the child is feeble, it should be supported upon the arm of the nurse with its face turned towards the floor, so as to prevent the liquid flowing back and being swallowed in large quantities. The amount of fluid used on each occasion must be learnt by experience. As a rule, three or four ounces each time is sufficient, and this should be practiced as frequently as possible. Dr. Parisot considers that salicylic acid has a destructive action upon diphtheritic formation. He showed by experiment that in distilled water the membrane simply became sodden and gradually disintegrated, this taking place very slowly, whilst in solutions of salicylic acid the membrane was rapidly dissolved; at the end of a few minutes only the meshes of network in which the cells had been supported were visible. The stronger the solution of salicylic acid the quicker and more complete was the destruction of the tissue. Dr. Parisot has further noted that when the diphtheritic membrane has been once removed by means of salicylic acid its reproduction was considerably slower and more imperfect, and therefore concludes that the acid has a favorable action upon the mucous membrane, which is rendered unsuitable for the growth of the pathogenic organism and the reproduction of the diphtheritic patches. —*Lancet.*

An hour-glass is made smallest in the middle to show the waist of time.

HYGIENE.

A POISONOUS THIMBLE.

Among the numberless causes of blood-poisoning through the skin, one which was lately recorded is worth noting on account of its evident simplicity and the ease of its prevention. In the case referred to the sufferer was a seamstress, and the mischief resulted from her using a dirty metal thimble marked with verdigris, a little of which appears to have entered a scratch on the thimble finger. We can well believe that this accident was not the first of its kind. Verdigris, it is true, is a mere metallic irritant, and not comparable in virulence to most living germs of disease. It is quite enough, notwithstanding, to excite local inflammation, which friction, contact with dyed cloth material, or the entrance of dirt in any form would quickly convert into a dangerous and general disorder. There is really no excuse for women who trust their fingers in these cheap and worse than useless articles. Steel thimbles are much safer and cost very little. Another variety also in common use is enamelled within, and is, if possible, even freer from objection. Let us not forget to add a caution that cuts or scratches on the hand should never be neglected by sewing women so long as dyes continue to be used in cloth manufacture.—*Lancet.*

TUBERCLE BACILLI IN THE AQUEOUS HUMOR OF CATTLE.

M. Mandereau, of Grenoble, having recently stated (see *British Medical Journal*, July 4th, 1891, p. 24) that tubercle bacilli could be seen in the aqueous humor of bovine animals suffering from tuberculosis before any other visible sign of the disease was present, MM. Leclinche and Greffier (*Sem Méd.*, July 1st, 1891) made a series of observations which, according to them, show the statement to be erroneous. They examined the eyes of twenty tuberculous oxen, and in no single instance could the tubercle bacillus be found in the aqueous humor, nor did the intra-peritoneal inoculation of that fluid in guinea-pigs in any case induce tnberculosis in the these animals.—*Brit. Med. Jour.*

If you are inclined to wonder at the number of maladies in the world, you should count the cooks.

MEDICAL CHEMISTRY.

HOW TO TEST DRINKING WATER FOR IMPURITIES.

Dr. Frederick J. Wulling, says in the *Pharmaceutical Era*: Sometimes the pharmacist is called upon, especially if his sign reads "chemist and druggist," to ascertain whether a sample of water is fit for drinking and domestic purposes or unfit for that end. It isn't a very difficult matter to apply a few tests for the simple determination of the figures or otherwise of a sample in question. A complete examination of the character of a sample of water is a very difficult problem and should be referred to a skilled chemist. The substances to be looked for primarily are organic matter, albumenoid matter, ammonia, nitrates and nitrites.

The nitrogen compounds are usually more abundant if animal matter is present; they of all other abnormal constituents render water the most unwholesome. Their presence, and of ammonia and of albumenoid substances, do not necessarily render water unfit for domestic purposes, but water containing them or either one usually becomes the breeding place of the germs of contagious diseases if they are around.

1. For organic matter, put a little of the sample into a beaker, add 2 or 3 drops of dilute sulphuric acid and color distinctly with a solution of permanganate of potassium. If much organic matter is present the color of the permanganate becomes discharged almost immediately; if less or very little, it takes longer to decolorize. If the color has not changed in 25 or 30 minutes it is safe to assume that organic matter was not present. This is a tolerably reliable test.

2. For nitrites, a little sulphuric acid added to the water forms nitrous acid if nitrites are present, which is easily detected by its power of liberating iodine from iodide of potassium. A little starch paste is mixed with a small quantity of a solution of potassium iodide, and the mixture added to the suspected water containing the sulphuric acid. If nitrites were present the nitrous acid formed liberates the iodine from the iodide, which turns blue with starch. This indirect method is a ready means for detecting the nitrites if present in not too small a quantity.

3. Nitrates are detected by converting into nitric acid, which turns morphia red. A portion of the water is evaporated to dryness, the residue treated with a drop of strong sulphuric acid (which makes nitric

acid of the nitrate) and a portion of morphine added. If nitrate was present the morphine gives red color.

4. For ammonia, Nessler's reagent is by far the best test. It may be made by dissolving 18 grains of oxide of potassium in a little water, adding solution of mercuric chloride until the red iodide of mercury first formed redissolves upon agitation. To this is added a solution of 50 grains of caustic potassa and distilled water to make 8 ounces.

This reagent will detect 0.00375 of a grain in a pint of water by giving a yellow color. A reddish color or precipitate forms with larger quantities of ammonia.

5. Albumenoid matter requires a more elaborated proceeding for its detection. If all of the above were found it is hardly necessary to go to the trouble of looking for albumenoids; the water would be unwholesome even if they were not present. If it is desired to test for them, nevertheless, Chapman and Waukly's test is the simplest to employ. If the water was found to contain ammonia, the latter must first be removed, as must also any urea that may be present. This is best done by distilling the water until it gives no reaction with Messler's reagent. Then add a strong solution of caustic potash and potassium permanganate and examine again for ammonia.

This test depends upon the fact that caustic potash and permanganate of potash cause animal matter while still in an albuminoid condition to unite with hydrogen to form ammonia.

It must not be understood that the tests just given are the only ones; on the contrary there are a vast number, all more or less useful, for the determination of the quality of a drinking water, but they are not all as practical and easily applied.

Clippings and News Items.

AN ARMY MEDICAL BOARD.

Will be in session in Chicago, Illinois, during February, 1892, for the examination of candidate for appointment in the Medical Corps of the United States Army, to fill existing vacancies.

Persons desiring to present themselves for examination by the Board will make application to the Secretary of War, before January 15, 1892, for the necessary invitation, stating the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from whence they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal knowledge, from at least two physicians of repute, as to professional standing, character, and moral habits. The candidate must be between 21 and 28 years of age, and a graduate from a Regular Medical College, as evidence of which, his Diploma must be submitted to the Board.

Further information regarding the examinations may be obtained by addressing the Surgeon General U. S. Army, Washington, D. C.

AMERICANS IN THE RIVIERA.

Dr. Wendt has been commissioned to visit the Riviera and the health resorts of the south of France in order to study and to report on the healthy conditions and the sanitary (or insanitary) arrangements, municipal and domestic, of the towns and hotels at such places as Cannes, Nice, Pau, Hyéres, Mentone, Monaco, San Remo, Alassio, Bordighera, Florence and Naples. He will find much to exercise his industry and acumen—much to blame, something to encourage, and many causes for warning to his countrymen. American visitors to the Continent are particularly liable to typhoid—of which the frequently recurring and sad examples are probably the main cause of this journalistic tour of inspection. Part of this special liability probably arises from their habit of drinking iced water. So long as, following the advice of Dr. Herman Weber, they confine themselves to natural mineral waters of recognized purity, they are safe. But these are not always at hand, and all do not yet understand that icing or aërating polluted water detracts nothing from its risks, and that even ice itself made from impure water is a source of danger. Where only "local drinking water" is to be had in the Riviera or anywhere on the Continent of Europe, it should always be first boiled and then filtered, as Dr. Gowers advises.—*British Medical Journal*, of Dec. 5th, 1891.

Dr. B. W. Richardson describes (*Asclepiad*, XXXI.) some old experiments in which he caused local anæsthesia by applying the positive pole of an electric battery over some narcotic. In many cases complete local anæsthesia was obtained; whilst the check experiments of applying the solutions and the current separately were followed by no anæsthesia.

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CLINICAL LECTURE.

ŒDEMA AS A SYMPTOM OCCURRING IN MALIGNANT DISEASES—DIAGNOSIS BY LAVAGE—ACUTE GASTRITIS.

BY PROF. CHAS. G. STOCKTON, M. D.,
BUFFALO.
Professor of Practice, University of Buffalo; Attending Physician Buffalo General Hospital.

Gentlemen:—This man came to us last fall for an opinion as to his condition. At the time I found a tumor in the epigastrium and left hypochondriac region, extending from the ribs downward and forward to the umbilicus. By a thorough emptying of the bowel, it was proved that it did not depend upon a fæcal mass in the colon, it must lie either on or over the stomach and particularly on the lower border of the stomach. I decided that it depended upon a malignant neoplasm of the greater curvature of the stomach and probably of the omentum also. This tumor remains in the same position, it is larger, it is more superficial, it is more tender than it was, you can see it now as well as feel it. When he is lying down it is very apparent, running from the free border of the ribs in the left hypochondrium downward toward the umbilicus.

The man has had great pain, from which he still suffers. The treatment consisted in the administration of morphine to relieve pain, and the giving of peptonized milk. You remember that we found a marked diminution of urea, there being not more than half the normal quantity—a symptom which I consider of great importance in the diagnosis of malignant growths in the abdominal cavity and elsewhere.

Lately, this man has developed œdema, and his legs are now bandaged to support them. You can see the lines of the bandage upon his calves. His right leg is worse than the left. He had no œdema at all when he first came here. I presume he weighed twenty pounds more than he does now; although he has had rest, he has not exercised, he has been fed all he could eat, and particularly of milk and predigested foods. Œdema is an important symptom always, and we must seek its cause carefully. When there is general œdema it usually shows over the sternum and ribs. I do not find it here. There is nothing in the heart to explain his œdema. At first thought you would say that his œdema was to be explained by his anæmia and by the disturbance of the blood from the carcinomatous disease from which he suffers, and that may be quite enough to account for it. General œdema and very marked anasarca are part of the typical history of the later stages of malignant disease. You know how apt it is to occur in the later stages of phthisis. No matter where the neoplasm exists, the waxy appearance of the skin and the œdema especially localized to the feet is part of the general cachexia. In this case it so happens that in addition to the cancers and its accompanying anæmia, there is something wrong with the kidneys. The urine contains albumen which has increased in quantity, the urine is loaded with casts and desquamated epithelium. The patient has a chronic, diffuse nephritis, due either to the malignant disease directly, or it may be of an entirely different nature. Its rapid increase, however, concomitant with that in the tumor of the abdomen, makes me think that there is malignant disease of at least one kidney. But we must not be carried away in our reasoning by any preconceived idea. As an illustration of

the errors into which preconceived ideas lead us, I might relate the anecdote of a professor in a Southern medical college, into whose clinic a man came whom he thought he recognized. The professor turned to his class and said: "Now, gentlemen, look at this man; can you tell me what is the matter with him?" And, as no one replied, he continued, "He looks perfectly well to you, I suppose, but the moment I put my eyes on this man I knew he was a deaf mute; he can neither hear nor speak." At this point the man spoke up and said: "I beg your pardon, boss, but it is my brother who is a deaf mute; he sent me in to see if you were ready for him."

It is very easy to get a preconceived idea about a case; therefore, before you make up your mind that a patient has a certain condition you must demonstrate it without jumping at conclusions. I might very easily have explained this œdema to you on the ground of the blood dyscrasia due to the malignant disease, and we might have neglected his kidney lesion, but by carefully diagnosing and then attending to it, we may be able to prolong his life.

I shall continue with the morphine to relieve this man's pain, the peptonized milk to support him. His bowels shall be kept open and his skin stimulated. There will be no medication directed especially against the Bright's disease.

DIAGNOSIS BY LAVAGE.

This patient has been under treatment for what has been supposed to be gastric ulcer. He is a woodsman, aged 45, who has been obliged to discontinue his work on account of vomiting, pain in the stomach, fermentation, with the formation of gas and intestinal indigestion in addition to the condition in the stomach. He has been on a milk diet, with salol and pancreatine given after meals, the former to prevent fermentation, the latter to aid in the digestion of the milk. At present he is without pain, he has no vomiting and he feels very well. Without discussing in detail the reasons for the diagnosis of gastric ulcer, I would say that of late we have been led to reconsider the question. In the first place, 75 per cent. of all cases of gastric ulcer occur in women, and they generally occur early in life, whereas this man is over 40. It is rare for an ulcer to occur in a man engaged in hardy out-door work. Again, his vomiting has been noticed to occur particularly in the morning, after breakfast, while in ulcer it occurs typically with equal frequency after every meal. If he would not empty his stomach by vomiting immediately he suffered pain. That is like gastric ulcer. The pain was rather localized, and at a point where the pain of gastric ulcer is usually felt, midway between the ensiform cartilage and the umbilicus, and a little to the right of the median line. There is local tenderness at this point also, but although I do not find a general tenderness, I can make out several tender points. The pain of gastric ulcer is usually made worse by eating at any time, but, on close questioning, I find that sometimes our patient can eat without any disturbance whatever. His vomiting, he says, has been sour, a symptom which is characteristic of gastric ulcer, in which, according to my experience, there is always an excess of hydrochloric acid. I must accept, however, the statement of other observers, who assert that ulcer is not always accompanied with an excess of hydrochloric acid. The contents of his stomach have not been examined, for the presence of this acid and the sourness complained of may have been due to acids of fermentation, acetic, lactic, etc.

This case is a little perplexing, and while strongly suggestive, it is not typical of gastric ulcer. Let us see if it can be explained on another hypothesis. There is a neurosis of the stomach, characterized by the excessive secretion of hydrochloric acid and by gastralgia. I believe that gastric ulcer depends upon imperfect innervation of a certain part of the stomach in connection with the same acid neurosis, and that owing to the intensity of the hydrochloric acid and the stomach ferments, this portion of the stomach is digested. But there may be the same group of symptoms of gastralgia, vomiting, localized tenderness and excess of hydrochloric acid without the actual existence of the ulcer. When there is no ulcer, but simply the acid neurosis, there may be occasionally a meal taken without any pain whatever, and then the next meal will cause pain. Depending upon that one point, I might dismiss this as a case of gastric acid neurosis, but the diagnosis can only be made after careful study, and we must not go so fast, for men and women have died of gastric ulcer without having had pain,

vomiting or any other recognized symptom, and yet the ulcer has been found *post mortem.*

I propose, therefore, to empty this man's stomach through the tube and examine its contents, first, to see if there is an excess of hydrchloric acid; secondly, to ascertain the digestive strength. Three or four hours ago he had a meal of bread and butter, meat, egg, and some milk. The egg and milk I did not intend him to have. Now we ought to find the stomach contents a pulpy mass, showing the meat decolorized, the starch dissolved and hydrated; the butter ought not to appear as distinct particles of floating fat, but the capsules of the fat cells should have been broken up and the contents should have passed in large part into the intestine.

Ordinarily, for the purpose of emptying the stomach, it is best to have a continuous tube, for joints are apt to interrupt the outward flow of solid substances. It should be four or five feet long and an inch and a half in circumference. It should be flexible enough to be introduced into the œsophagus without causing damage, but not too soft. It should have two openings into the stomach, one at the end as large as the lumen of the tube, the other on the side, so as to render accidental plugging of the tube less likely to happen, but this opening should be less than an inch from the end, as otherwise gas entering it from the stomach might spoil the siphonage. The stomach tube is usually passed twenty two (22) inches from the teeth. Sometimes, owing to dilatation of the stomach, it is necessary to insert the tube to a depth of from twenty-five to twenty-eight inches, and the distance depends somewhat on the height of of the body, but there is unusual uniformity in the rule that the tube acts best when passed to a depth of twenty-two inches.

I will now introduce the tube, directing the patient to give most of his attention to taking long breaths, in order to distract his attention from the tube. It is a good plan to have the patient vomit some of the gastric contents undiluted, but often, as in this case, it is necessary to put in a little hot water, so as to fill the siphon, and it is well to make sure that the water is not too hot.

After some manipulation of the tube, I remove part of the stomach contents, showing lumps of undigested meat, oil floating on the surface of the fluid, and starchy food in masses. I see nothing in the way of milk or milk curd. The digestive strength of the stomach is below par, and as there is so much solid matter, we will abandon the attempt to empty the stomach and withdraw the tube. Applying the phloro-glucin-vanillin test, there is a fair reaction to hydrochloric acid, but no excess. The chloride of iron and carbolic acid test shows the absence of lactic acid.

Considering this man's age and occupation, the history of pain and vomiting, in the morning particularly, and not always following meals, the absence of an excess of hydrochloric acid, the slowness in the digestion of meat and albumen of all kinds, all of which things are contrary to the idea of gastric ulcer, it seems to me that this man has not that disease. Furthermore, he has not that form of neurosis of the acid type which I have described to you. He has a form of indigestion in which the ferments are not of sufficient strength, and he is lacking in the power to digest albumen. This we can prove by filtering part of the gastric contents and adding a small amount of egg albumen and noting the time necessary for digestion at the ordinary temperature. The time should be two or three hours, if it be five or six hours the stomach is weak, and if the egg remains for twenty-four hours without change, the peptic strength is practically nothing.

The origin of this man's trouble was probably from taking too large amounts of food when he was tired and unable to digest it. The pain from which he has suffered is an ordinary gastralgia. How to account for the local tenderness I do not know, unless there has has been some local injury to the stomach by a hard fragment of bone which he has swallowed.

I am inclined to think that by giving a milk diet, with long intervals between the meals, he will improve. The milk should be given digested, if necessary, either by peptonising it or by giving pancreatine with it, as is now being done. If he had an excess of hydrochloric acid, either with or without ulcer, I would give frequent meals to keep the acid busy digesting food rather than acting on the stomach wall. The treatment of the acid condition by complete rest of the stomach and rectal nutrition may also be carried out, for if we give no food the acid will not be secreted. But one extreme or the other of treatment must be carried out.

ACUTE GASTRITIS.

There is little in the history of this case that needs to be repeated. A man of forty-three, in good health, save that he had been drinking, and while somewhat under the influence of alcohol, he went into a barber shop and was there given to drink what purported to be bay-rum, but which was in fact a mixture of bay-rum and ammonia. How much of this he drank he does not know, but probably three or four ounces. He fell down and lost consciousness, and then the next thing he remembers is that he was in the hospital. He was treated at once by the accident hospital surgeons; his stomach was emptied and he was given demulcents. He was brought here unconscious, but he very soon revived and the stomach was found to be acutely inflamed. This is an instance of a rather rare disease, according to my classification—acute gastritis. He had the usually profound symptoms, which subsided under treatment, but they were followed by symptoms of sub-acute gastritis, which is very apt to follow the acute. The sub-acute gastritis was accompanied by such symptoms as vomiting, tenderness on pressure, general malaise, slight rise of temperature, a continued albuminuria, which was present during the acute gastritis, and wakefulness. The sub-acute gastritis might possibly have been, to a certain extent, due to the alcoholic habit. He has been drinking right along since Christmas, and probably his nervousness and vomiting have been due in part to that fact. He has made a good convalescence on demulcents and rectal nourishment till he was able to take food by the mouth, when he was given peptonized milk in small quantities.

The symptoms of acute gastritis, properly so called, are pain, tenderness, vomiting, and the vomit containing mucus and sometimes blood and shreds of mucous membrane, generally high fever, usually very marked cerebral disturbances and often albuminuria, sometimes casts and blood appearing in the urine as well as albumen; sometimes hæmorrhages and melæna or bloody discharges, showing the presence of changed blood in the stools.

I am not going to quarrel with those writers who call what is described here as sub-acute gastritis, acute gastritis. It is simply a question of terms. But remember, when you have an acute gastritis due to poisoning or the swallowing of hot fluids, you have a serious disease to deal with. That which is ordinarily called acute gastritis, I think is properly called sub-acute gastritis, since its symptoms are much milder. The treatment by demulcents is very important. A person may be given oil when he is vomiting to make the vomiting easier and to help empty the stomach. Pure salad oil may be given; after that mucilaginous drinks, like acacia water or slippery elm tea, or albumen in water should be administered until the stomach is quieted down. Then the patient should be given bismuth stirred in water, not the dry powder. It cannot be dissolved, but it can be suspended in mucilage water better than in clear water. It acts as a dressing to the inflamed mucous membrane. With the bismuth I think it is very useful to give cerium oxalate, and it is also advisable to give such patients morphine hypodermically.

COMMUNICATIONS.

THE MEDICAL TREATMENT OF APPENDICITIS, WITH A REPORT OF FIVE CASES ENDING IN RECOVERY.*

BY A. B KIRKPATRICK, M. D.,
PHILADELPHIA.

The diagnosis, symptomatology, and pathology of diseases in the region of the cæcum have been so recently and ably given by Drs. Price and Morton, members of the society, that it would be useless for me to go over the ground again and attempt to add anything new on the subject. Surgery has made such marvellous advancement and accomplished such brilliant results in the last decade, that the medical treatment of certain diseases appears, at least for the time being, to be eclipsed. I am led to believe, from my limited experience, that some of our younger surgeons are too ready to perform abdominal section before they have exhausted the medical armamentarium, which, though perhaps somewhat slower, *may* be surer and subject the patient to less risk.

I think the surgeon in consultation with the physician will be able to determine and select the cases for operation, if they are so fortunate as to see them in

* Read before the Philadelphia County Medical Society, December 9th, 1891.

their incipiency, but in many of these cases the physician is called in late, and the surgeon later—too late in some cases.

We are all more or less infatuated with the wonderful results of present surgery, because, I think, it is something tangible. We make our diagnosis of appendicitis, open the abdomen and remove the diseased organ. There is the ocular proof of our skill in diagnosis and operation. In medical treatment our evidence, if we can produce any, is not so conclusive. It is of a more circumstantial character.

No one of the same experience feels more deeply than I do the debt of gratitude we owe to aggressive surgeons, and no one, I think, takes the knife with more satisfaction, but I must always be *certain* that it is the *only* or safest method for the patient.

In the five cases that I wish to report, I demonstrated within twenty-four hours —in four of them at least—that an operation was not necessary, and all the five recovered without section. You may infer that they were all mild or benign. Three of them were, because seen early and treated vigorously.

Perhaps the title of my paper is not broad enough to cover it, but I wish to include in the medical treatment of typhlitis everything short of surgical operations, for I rely as much, or more, on mechanical measures as on internal medication. I wish to report what I consider as the most critical case first, though it was my third in regard to date. The first case dates from March, 1889.

In four of the cases other physicians had been in attendance, or saw the patient with me in consultation. Two of the cases came to my notice late in the disease, and to make the history complete, I shall be obliged to read parts of several letters which were kindly written to me by the physicians who first had the cases in charge.

For the previous history of the first case, I am indebted to the kindness of Dr. Edwin B. Wheeler, who wrote me the following letter two months after treating the case:

"Was called to see Master A., thirteen years old, Thursday, April 2, 1890. He had been constipated a day or two, evidence conflicting as to the condition of the bowels previous to that time. There had been no diarrhœa, however. I first thought it a case of typhoid fever, as the father had just recovered from that disease. I ordered a powder of calomel, but no action. Then gave one bottle of citrate of magnesia in half-bottle doses, with no result. The pain and tenderness in inguinal region increasing. Some tympanites. Gave injection of tepid, soapy water, with a few drops of turpentine without any result. On Friday I gave drachm doses of Rochelle salts in one-third of a glass of water every hour for four doses, and tincture of hyoscyamus. There was no result so far as any action of the bowels was concerned. The vomiting was increasing and the tenderness covering a larger area. During this time it had become apparent that we had to deal with an obstructed bowel due either to intussusception typhlitis or perityphlitis.

"Injections on Saturday morning were not retained. Passes up a catheter, but still injection was not retained. Gave morphine in small doses. Saturday p. m. Dr. J. H. Dripps saw the case with me. We agreed as to the case, but were both on the fence as to the advisability of section. We then called in Dr. Noble, of the Kensington Hospital, Saturday, 6 p. m. After talking over the case, we concluded that the boy's best chance was to have the belly opened and the obstruction removed. We ordered a room cleaned and agreed to see the case the next day.

"At 9 a. m., Sunday, April 6th, we (Drs. Dripps, Noble and myself) met and concluded that the boy's chance would be slight if we operated in such unsanitary quarters, with such nursing as the father and mother could give. The parents agreeing, we wrote to the Pennsylvania Hospital, asking them to take the case, the father to let me know the result of his errand. We separated with the understanding that if the hospital refused to admit him, we would operate, Dr. Noble saying he would hold himself in readiness until 2 p. m.

'About 11 a. m., the father informed me that the hospital authorities would send for the case as soon as I desired. I sent him back to the hospital with word to send for the case immediately. Somewhere about 3 p. m. the father informed me that he had been down town, but did not go to the hospital. He had stopped to see the boy's aunt, who said he should not go to the hospital. Whereupon I dismissed the case, refusing to have anything further to do with it. The case has certainly resulted very fortunately in your hands, and I am truly pleased, etc."

I will not go fully into the diagnosis of this case, for I was perfectly satisfied when I learned from the father who had consulted in the case.

"I was called in to the case at 10 p. m., Sunday, April 6th. The symptoms all indicated complete obstruction of the bowel and collapse. He had vomited first on Wednesday. The temperature was 96½°; pulse indistinct at wrist; heart was 140 per minute, and he was in a cold perspiration; respiration 40. Abdomen exceedingly tympanitic and bladder much distended. There was stercoraceous vomiting, and nothing had been kept on the stomach for days. I at once gave a hypodermic of morphine, atropine and strychnine, and then emptied the bladder by a catheter, and about sixteen ounces of water passed. The patient was apparently moribund, but revived somewhat after the hypodermic injection, and though I feared he would die while giving it, but I knew there was nothing to lose and thought there might be a slight chance for life if the obstruction could be removed, so I had him supported in the knee-chest position and injected a pint of warm liquid containing

castor oil, turpentine, whiskey and Epsom salts. This was about 11 p. m.

This was kept in the bowel for half an hour by a compress, held in position by the hand, then he was allowed to lie down on the right side. Within an hour there was copious evacuation of liquid with scybalous masses The injection was repeated at 12 o'clock, and another free movement resulted. These greatly relieved the tympany and pain. We then began to give turpentine and whiskey by the mouth once in two hours, and also a drachm of Epsom salts in hot water once in two hours alternately. Only the first dose of salts was rejected. The whiskey and turpentine were retained. These were regularly administered through the night I left the patient at 1 a. m. asleep, and he had become much more comfortable.

"On returning in the morning, I found there had been several more movements, and the bladder had been emptied naturally. The tumor over the right iliac fossa had nearly disappeared, and the pain and tenderness were much less. The temperature was normal. The tongue and sordes on teeth indicated typhoid fever. There were five movements of the bowels within twenty-four hours after the enema, and not less than three to six any day after for two weeks. The temperature gradually rose to 102°, and the evening temperature was about that for a week, when it gradually declined, but did not become normal till the 29th, or three weeks from the time I first saw the case. The stools had quite the appearance of typhoid, as did the tongue, and there was a suspicious eruption on the chest and abdomen. After the obstruction was removed the case was treated as a simple case of typhoid fever. He had two grains of quinine and one-thirtieth of a grain of strychnine three times a day, with nitro-muriatic acid, pepsin and bismuth every four hours, and paregoric when needed to control the bowels, and a liquid diet throughout.

"At noon, the fourteenth day after I first saw him, after some pain and flatus, he passed a slough from the bowel, which, in the recent state, was elliptical and two and a half inches the long diameter. There seemed to be some pain and tendency to collapse, so he got another hypodermic and free stimulation. There was also a rise of 2° in temperature. He rallied the next day, and made a rapid and complete recovery.

"On May 6th, which was just a month from the time I first saw him, he sat up and took solid food.

"He is a strong, healthy boy and now drives for me."

I watched the case very closely throughout, and feel certain that the intussusception, or typhlitis, or perityphlitis, was followed by a clear case of typhoid fever. I am by no means so clear in regard to the pathological condition in the region of the cæcum and shall greatly appreciate the views of the members of the society on that point.

"The second case, Mr. M. K., who is a prominent and very active literary man in this city, dates from March 24, 1889.

"The patient gave me a very intelligent history of his case, which was that there had been a gradual decrease in the evacuations for several weeks, with a great deal of distention and discomfort of abdomen, and finally obstinate constipation followed. When I first saw him there had been no movement for several days.

"He had a tumor and localized pain in the right iliac fossa. Temperature 103½°. Pulse 120. Coated tongue, etc.

"He was given a hypodermic of morphine and atropine for the pain, which gradually spread over the abdomen as the gas accumulated. Two large doses of castor oil and turpentine were taken without any action. He took calomel, soda and ipecac powders for twelve hours, followed by Hunyadi water, but still there was no movement of the bowels. We then resorted to the enemata of turpentine, laudanum, castor oil, Epsom salts, and hot water, given in the knee-chest position. These moved the bowels freely and relieved the pain and distention. Turpentine stupes were also used freely.

"There was a double inguinal hernia in this case, and to satisfy ourselves that there was no strangulation of the gut. Dr. W. W. Keen was called in consultation, and pronounced the case free from any such complication and confirmed the diagnosis of appendicitis. He suggested pills of colocynth comp. and opium.

"The patient made a good recovery, and for several weeks took pills of aloin, strychnine, belladonna, cascara and physostigma to relieve the atonic condition of the bowel, and an occasional dose of Hunyadi, as he was rather stout and full-blooded.

"In July, or four months later, this same patient had a recurrence of the trouble while at the seashore, which began, possibly, with a slight tendency to constipation early, but the first the patient complained of was a severe serous diarrhœa with high temperature—104°. Pulse 128 (normal 58). Severe pain in the ileo-cæcal region. This attack began before I took up my summer practice at Cape May Point, and Dr. F. E. Stewart, of Wilmington, was called in.

"He made the diagnosis of colliquative diarrhœa, and gave acetate of copper and morphine to check it, and aconite for the fever, but nothing seemed to have any permanent control over the bowels.

Right here in this case, which was my first patient, but his second attack of appendicitis, I learned a very valuable lesson. Here was an obstructed bowel, and nature was trying, by pouring out a very excessive liquid secretion, to flush out the obstruction or foreign matter.

I simply took the cue from nature, and with small, frequently repeated doses of calomel, ipecac and soda, followed by salines, accomplished the object, and in less than six hours had the satisfaction of seeing the tumor, which had been in the region of the cæcum, deposited in a commode, which the black, very offensive mass nearly filled. In this attack we used hypodermic injections of morphine for pain, and pilocarpine for the high fever and dry skin and tendency of cerebral congestion, as the kidneys were not acting at all freely. There was no vomiting after the first hypodermic, and the patient began at once to take iced

champagne and Apollinaris, and soon was able to take milk and other liquid food.

In this case no resort was had to rectal enemata, as the bowels were thoroughly cleared out within six hours after the time I first saw the patient, and in three or four days he was attending to his regular business. He took the aperient, tonic pills for several months, and was requested to use Hunyadi water freely, and rectal injections, if the symptoms occurred again. He has had no recurrent attacks and no constipation since.

The fourth case, Miss S., occurred at Cape May Point, and was first seen and treated by Dr. F. E. Stewart, Wednesday, August 25, 1891. I wished to speak of this case at the special meeting, September 28th, when Dr. Morton read his interesting paper on "The Surgical Treatment of Appendicitis," and wired Dr. Stewart for his diagnosis, and he sent me the following telegram: "Case was obscure. Called Dr. David Stewart in consultation. He said 'appendicitis.'" I am indebted to Dr. F. E. Stewart for kindly furnishing me the history of this case, which I quote from his letter:

"In the case of Miss S., there were pain and tenderness over the abdomen, which, as the case developed, became marked in or over the right iliac fossa. Instead of dorsal decubitus, the patient sat in a chair with her thighs flexed on the abdomen, and could not lie down until relieved by treatment. There was fever; temperature 102°. There was constipation, nausea, and, if I remember correctly, some vomiting, but the latter was not a marked symptom of the case. I did not discover a tumor on abdominal palpation or vaginal touch, but Dr. David Stewart, who saw the case with me on the second day, called my attention to what appeared to be a doughy mass on the right side of the body on examination *per rectum*. I must confess that I would not have discovered said mass except my attention had been called particularly to it, or, in other words, I might have had a suspicion of its existence, but it required a finger of more education than mine in feeling for tumors of this nature to make a positive diagnosis.

"The treatment suggested consisted of hot turpentine stupes, opium and iodide of mercury. Under this she seemed to improve.

"From the beginning I recognized the gravity of the case. I advised her to go to the city at once, as proper nursing was out of the question, situated as she was at the Point. Furthermore, I told her if she got worse an operation might become necessary, and then it would be too late to remove her.

"I first saw the case on Monday, August 31st, at 6.30 p. m., and found her extremely weak and nervous from the trip from Cape May Point. The temperature was 103½°, pulse 120, abdomen tense, tympanitic and extremely sensitive. I found a large tumor in the region of the ileo-cæcal valve, intense pain and nausea. There was extreme tenderness over the tumor and abdomen generally, indicating a good deal of general peritonitis.

"Miss S. was brought to the city by her sister-in-law, and they went into a house where the furniture had just been piled in. There was not even a bed up or any convenience for heating water, so in regard to nursing and environment she did not improve her condition. When I arrived she was on a bed that had been hastily put up.

"The sister-in-law, who acted as nurse, got hot water for stupe and enema, and the patient had the same treatment, practically, as the boy—the first case reported—except that the nurse gave the enemata, who proved very intelligent and efficient.

"When I called next morning, I found the bowels had moved freely several times, and though the patient had had a restless night, she had slept some. The pain and distention were nearly gone and the temperature had fallen to 101°. By Wednesday, September 2d, the temperature was normal and the pain was entirely gone. She began sitting up Thursday, without my knowledge, and the next Wednesday she went back to the Point. I believe she had a slight recurrence of the pain, inflammation and constipation the week after she got home, but they were controlled by injections, stupes and opium suppositories.

"She has enjoyed good health since."

The other two cases of typhlitis, which occurred in my practice within the last year, were quite similar in regard to symptoms and treatment to the others that I have reported in detail, and as I relied only on myself for the diagnosis and treatment, I will not weary you with a repetition of them. I have not aimed to give the latest and most approved treatment from the text-books of the day, but what seemed to me to be indicated and necessary in the emergencies of these cases, when I dared not waste a moment in temporizing or experimenting. It appears to me a serious loss of time to depend solely on external applications to the abdomen and protiodide of mercury with belladonna and opium internally, when we have to deal with a bowel obstructed by hardened accumulation of fæces. I believe most cases of obstruction of the bowel, if not due to intussusception or strangulated hernia, are due to the absence of the natural secretion caused by the localized typhlitis, which, if not soon relieved, becomes a perityphlitis, and then more or less general peritonitis must result. The rational method seems to me to be: (1) To relieve the pain by hypodermic injections. (2) To remove the cause or obstruction by causing, if necessary, pathological or excessive secretion, by giving some saline, which I believe is the best antiphlogistic for the inflamed bowel. (3) To soften the hardened fæcal accumulation from below with

enemata, solution of Epsom salts in water as hot as can be comfortably borne, to which I add turpentine and oil. The knee-chest position, with copious enema, favors the distention of the colon up to the seat of the disease.

I have found by experience that the enema to be effective must be given in this position, and that it must remain in the bowel for some time, and in several of my cases it was necessary to repeat the operation three or four times. This plan of treatment has been successful in six cases, which are all that I have treated; but I fully realize that it may fail in the seventh.

I think it is truly in meetings like this that surgeons are broadened medically and physicians surgically—if I may be allowed the phrase. Doctors are only human, as we hear it said of ministers, and as such they are prone to do what they prefer, whether it be surgical or medical, and naturally they do best what they like to do and do oftenest.—*For discussion, see Society Reports.*

ABSCESS OF THE ANTERIOR VAGINAL WALL.*

HENRY R. SMITH, M. D.,
DETROIT, TEXAS.

I was consulted August 11, 1891, by Mrs. G.——, aged twenty-one, married two years. She has never been pregnant, looks swarthy, is weak and gets easily out of breath. She dates her present trouble back six years. First menstruated at twelve years of age; has not menstruated during the past four years; has constant pain in the lower part of the abdomen; has to get up three or four times during the night to urinate. She has a leucorrhœa and some pus from the vagina; temperature 101°; pulse weak, and has not been able to do her housework for some time past.

On digital examination I find a tumor-like body situated in the anterior vaginal wall, just inside the vulva, the size of an orange, hard to the touch, and no fluctuation. The exploring needle reveals pus. A free incision was made into the tumor, and a pint and a half of foul-smelling pus evacuated. The cavity, which measured four inches, was thoroughly curetted, and then irrigated with bichloride of mercury solution 1-2000, and also peroxide of hydrogen. The patient was seen three days later; some pus escaping. A drainage tube was introduced, and the cavity ordered to be washed out twice daily with bichloride solution. No fever.

On the tenth day after operation, patient was doing well. No cystitis; patient sleeps well at night; treatment continued.

Fifteenth day, menses returned, and not painful. Drainage tube removed, and cavity injected with tincture iodine. Twenty-first day, some pus discharging; drainage tube re-introduced; cavity ordered to be washed out twice daily with bichloride solution. Patient looks well; has gained twelve pounds in weight. Thirty-first day, no pus; drainage tube removed, and cavity injected with nitrate of silver.

Sixth week, there was no discharge; menses regular and not painful; no cystitis; abscess cavity retracted. Patient is now doing the cooking for twelve cotton pickers, and considers herself well. Case discharged.

I wish to say, in conclusion, that Mrs. G.—— has been taking medicine from doctors and using patent medicines for the past six years. The lower part of her abdomen is a solid scar from blisters.

* Read before the North Texas Medical Association, December, 1891.

THE SIMPLE EXTRACTION OF CATARACT.*

EDWARD JACKSON, M. D.,
PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC AND SURGEON TO WILLS EYE HOSPITAL.

The old flap operation for the extraction of cataract, when it was successful, was one of the brilliant triumphs of operative surgery. The trouble with it in the old time, before the day of Graefe, was, that it was successful in only a minority of cases. The real achievement of the last few years with reference to it has been the increasing of the percentage and the perfection of its successes, until they have surpassed anything achieved by other operations for cataract extraction. This has been

*Read before the Philadelphia County Medical Society, October 28th, 1891.

brought about by collateral advances in medicine and surgery, that have given us an understanding of sepsis and asepsis, of the myotic power of eserine and its allies, and of the anæsthetic and other powers of cocaine.

My purpose in this paper is to discuss the operation of "simple extraction" as I practice it, with the reasons for choosing certain procedures rather than others, and some comparison of the results of the method with modified linear extraction, or modified Graefe method, which it has largely replaced. I used the term "simple extraction," because it is one commonly employed to designate the operation in question, and not to give the idea that cataract extraction was at all a minor or trifling operation. I think though that the term is strictly applicable, for the operation is distinctly simplified in certain directions. And in that it is more simple it conforms with the general tendency of surgical advance at the present time, which is toward the omission of various procedures that were formerly believed necessary, and the concentration of our attention on what is really essential, that it may be done in the best possible manner.

The corneal section is made upward, mainly because it seems to me that the wound in this position is much better protected beneath the closed lids from either infection or the relative displacement of its lips than the downward section can be. It is made in the clear cornea, sometimes as close as it can be to the limbus without encroaching on it. It is parallel to the corneal margin, the plane of the knife making it being parallel to the plane of the periphery of the iris. It is made to include nearly, and sometimes quite, half of the circumference of the circle of which it is a part. The exact position of the section and its length are determined by the size of the cornea and the supposed size of the lens. The plane of the section should be well in front of the iris, for the risk of prolapse of the iris is thereby greatly lessened, yet the incision must be long enough to permit the escape of the lens. The section is made with the knife described by me in the *American Journal of the Medical Sciences* for March, 1888, for the reasons there given, that it combines to to a large extent the manageableness of the Graefe knife with the smooth incision of the Beers knife. Usually the incision is almost completed by the forward thrust the cutting edge being carried by it out of the anterior chamber, and the remaining bridge of corneal tissue severed as the knife is withdrawn.

The capsulotomy is made with the point of the knife used in making the corneal section, and is about in the plane of the corneal section, as the lens lies against the cornea after the escape of the aqueous, I have in a few cases opened the capsule before completing the corneal section, as the point of the knife was carried across from the puncture to the counter-puncture. This was done in the fear that after the escape of the aqueous the pupil would contract so that it would be difficult or impossible to make a sufficient laceration of the capsule without wounding the iris with the knife-point. Such a manœuvre, however, required a slight change in the direction of movement, and prolonged a little one of the most critical periods of the operation. It was given up on finding that a sufficient opening in the capsule can always be made through the pupil after the completion of the corneal section. The opening that is necessary to make in the capsule is really quite small, a slit 4 or 5 mm. long is quite sufficient, probably because, when the solution in the continuity of the capsule is once started it extends quite readily, as widely as it is needed, under the pressure of the lens during the stage of its delivery.

The advantages of the method of opening the capsule are that by it we get rid of one instrument, the cystotome—an instrument hard to keep clean at the shoulder from which the pricking point projects, hard to get and keep perfectly sharp, liable from its shape to catch and damage the cornea or iris in case of sudden movement while it is in the eye, and which I have seen more than once, by its direct backward pressure, dislocate the lens and allow the escape of vitreous. Then the small opening in the capsule nearly in the direction of the corneal section seems to have a decided influence in making sure of the proper rotation and presentation of the lens in the corneal wound; and cortical matter as well as nucleus has a perfectly direct avenue of escape; and if cortical matter remains after the nucleus has been extracted, it remains inside the capsule, and not in the anterior chamber where it would exert its well-known deleterious influence on the iris; or, as some

have supposed, furnish an especially favorable culture medium for the pathogenic bacteria introduced on the shank of the cystotome or along a path of capsule incarcerated in the corneal wound. Again, with this method of opening it, there is no chance that portions of the capsule will prolapse or become incarcerated in the wound, and so complicate the healing and endanger the ultimate result more insidiously, but quite as seriously, as prolapse or incarceration of the iris.

This method of opening the capsule has this disadvantage, that when the pupil contracts, as it does in the process of washing out the anterior chamber, the iris sometimes entirely covers up the rent in the capsule and makes it much more difficult to dislodge any remaining cortical matter. Under these circumstances, it is best to make no effort to dislodge it, for, in my experience. cortical matter *left within the capsule* after the removal of the lens nucleus is innocuous, and is certain to be removed by absorption in a few weeks at the farthest, causing some delay in the full restoration of vision and detracting from the brilliancy of the operation, but in the end giving the patient the best result.

The delivery of the lens is effected by making pressure with a lens spoon backward on the lower portion of the cornea, and with a corneal spatula slightly downward upon the upper ciliary region, causing the lens to push into the pupil and engage in the corneal wound, the movement of the lens being steadily followed by a slight upward movement of the spoon, and the necessary pressure never relaxed until the greatest thickness of the lens has passed through the corneal section. It is of the utmost importance that the pressure be maintained steadily ; any intermitting of it that causes the lens to alternately advance and retreat is liable to bring about the displacement of the lens, and the presentation of the vitreous in its stead. After the nucleus has escaped, the pressure is gently continued until any evident masses of cortex have also been extruded, and then withdrawn.

Washing out of the anterior chamber I have practised after the method and with the apparatus of Dr. Lippincott, of Pittsburg, for the last year, as the principal step in the operative toilet. If the iris has prolapsed, the stream of boric acid solution is the simplest and best repositor, its effect being to carry the iris into position, and at the same time to provoke a marked and very satisfactory contraction of the pupil. If the opening in the capsule remains freely accessible, the current may be directed into it and all lenticular *débris* removed. But if this is not readily accomplished, I content myself with a thorough washing out of the anterior chamber, at the end of which the pupil is found small and central, stroking of the iris with the spatula, or poking into the angles of the cornea wound to dislodge incarcerated iris or capsule, being thus dispensed with.

Eserine is instilled after the washing of the conjunctival sac, although the effect of the irrigation of the anterior chamber has been to already secure a small central pupil, in order that this contraction of the pupil may be maintained and the iris drawn as far as possible away from the cornea. In a single case in which I omitted the use of eserine a slight prolapse of the iris appeared at the end of thirty-six hours. Eserine was then used, and the prolapse promptly reduced. Later, however, it again appeared, and the pupil was left somewhat distorted.

Simplicity. As compared with the Graefe method and its modifications, "simple extraction" deserves its name, in that the iridectomy that it dispenses with is the most painful and one of the most delicate portions of the former operation, and that the uninjured iris is more readily reduced and kept wholly within the eye than the iris that has lost the tensile action of its sphincter. It prevents the extremely insidious accident of incarceration of the capsule. Again, the dangers of that serious complication, prolapse of the vitreous, are reduced to a minimum. Without rough handling, or especially unfortunate movement of the eyeball, it is scarcely possible for this accident to occur before the nucleus is delivered. Even in a case of dislocated lens with fluid vitreous the delivery of the lens was readily effected without the use of a spoon or loop, and no vitreous was seen until this had been accomplished.

Ease. The statement is usually made that with simple extraction the delivery of the lens is slightly more difficult. But, in my experience, this is true only to a slight extent as to the complete removal of the cortical matter. The delivery of the nucleus is not to any notable extent more difficult. I operated yesterday on a case where the lens were par-

ticularly large and the cornea small. From the other eye, in which the conditions were precisely similar, I had removed the lens several months ago, after a preliminary iridectomy, with a good deal of difficulty. The simple extraction was, if anything, the easier one. After the first operation a considerable amount of cortex remained in the capsule, and the same thing occurred with the second. Still, the removal of all remaining cortex is, I believe, a little more difficult after the simple extraction, though certainly not more dangerous.

Prolapse of the iris. The danger of this complication is the greatest drawback on simple extraction—about all that keeps it from being an ideal operation. When any considerable prolapse occurs it causes a distorted pupil, is liable to delay the healing, is followed by unusually high astigmatism, and, if very large, might endanger the eye. The impression is abroad that it is very much more likely to happen after simple extraction than after extraction with iridectomy, at least, it is scarcely counted as one of the risks of the latter operation. But iridectomy does not prevent the occurrence, except of the part of iris that has been removed. Indeed, in so far as it removes the restraining influence of the iris sphincter and leaves angles of iris floating within the eye, iridectomy directly favors incarceration, the form that prolapse assumes after it. Knapp has recently reported statistics of about five hundred cases of simple extraction, with prolapse of the iris in eight per cent. of the cases. It is probable that incarceration of a part of the iris at the angles of the wound is about that common among Graefe's extractions. In my own work prolapse has not been more common after simple extraction than was incarceration after iridectomy. More than this, the great mass of cases of prolapse under the use of eserine flatten down and cause as little trouble as the incarcerations after iridectomy, and do this without excision or any other special treatment, without notably delaying the healing, and, so far as can be judged, without any additional ultimate danger to the eye. I speak thus particularly about prolapse of the iris, for it was fear of it that kept me for a considerable time from giving up iridectomy. Still prolapse of the iris is the chief danger of the method and it should be carefully guarded against by the use of eserine, by keeping the patient as quiet as possible, by avoiding any pressure of the dressing or through the dressing on the globe, and by placing the corneal section as far away from the iris as possible, compatible with making it large enough to permit the escape of the lens.

Visual acuteness. The principal advantage of the simple operation is the exclusion from the eye of a large amount of very imperfectly focussed light, and the retention of the power of adapting the eye promptly and fully to the varying intensity of the light to which it is exposed. This advantage, although shown partly by statistics of visual acuteness, can never be fully exhibited in that way. An eye may be able to decipher even the smaller test-types, although their image on the retina is engulfed in a flood of unfocussed light coming in through distorted portions of the cornea opposite the coloboma left by an iridectomy. But even with only the ability to make out the same type, the vision secured by the exclusion of this useless and confusing excess of light is for all practical purposes far superior.

Again we find in age the retina habitually guarded against even the light admitted to the younger normal eye by a diminished pupil; and the reversal of this, the flooding of the senile eye, with its slower nutritive processes, with an amount of light largely in excess of what it has been accustomed to, especially the crippling of its power to defend itself against sudden increase of illumination cannot but diminish its power of resistance to unfavorable influences, and lead to ultimate deterioration of vision.

It was watching the gradual deterioration that occurred in certain eyes that had been subjected to extraction, with iridectomy, that first made me desirous of trying the simple method.

Indications for iridectomy. I am not aware of any operator who proposes the abandonment of iridectomy in all cases. It is pretty certain that in at least one class of cases all will continue to practice it, namely, those in which from iritic adhesions or from other causes the pupil is extremely rigid and undilatable. The other indications for it are not so well agreed upon, but probably one of the most important of them is extreme restlessness and insubordination on the part of the patient. All of my cases of prolapse

have been in patients markedly of that character. For the present most of us will be apt to fall back on iridectomy for a number of reasons, as I did in a case about a week ago where there was reason to suspect a large lens and saccharine diabetes, so that I feared sloughing from a large corneal flap. But with myself, as with many others, the present tendency is to do iridectomy less and less frequently, and it is probable that the cases in which it is either necessary or desirable will ultimately be found to be few and far between.

KIDNEY DISEASE WITH CARDIAC COMPLICATIONS, WITH EXHIBITION OF SPECIMENS.*

JOSEPH M. PATTON, M.D.,
CHICAGO, ILL.

The patient, male, was 40 years old. He had been living in a Western city for eight or ten years, and his family during this period had had no track or knew anything about him until he came to this city in the care of an escort, coming from Ogden. He told me he has suffered at various times during the past three or four years from what is termed in the Western country "mountain fever," and that he had had a great deal of trouble with his liver. He had worked at printing, being a foreman in some large printing establishment, leaving that and going out into the open air and doing all kinds of hard work in the endeavor to stimulate himself to a better physical condition, and finally, after being told by his physicians that he had Bright's disease, and would live but a short time, he accepted their advice and returned to Chicago. The man who came with him did not expect him to live until he reached Chicago. I saw him twelve hours after his arrival and found him sitting in a chair suffering from violent dyspnœa, unable either to lie down, to stand or walk. The lower portion of the lungs œdematous; the lower extremities were swollen until the skin over the tibialis anticus in the left limb had bursted and was running freely with water. The liver was greatly enlarged from passive congestion until it filled three quarters of the abdominal cavity; his stomach was somewhat congested, and he was suffering a good deal of distress in this organ. He had no temperature; his pulse was rapid and irregular; the heart was in a very arhythmic condition, but was beating with a good deal of force, which was not at all commensurate with the condition of the circulation in the arterial tract. Examination of the heart revealed a very much enlarged condition of the organ, which was due partly to hypertrophy, and more so to dilatation of the left ventricle, the line of dulness extending two inches to the left of the nipple and down to the seventh intercostal space. No murmurs to be heard at the aortic valve. Of course, it would be a question in a condition of this kind as to whether or not a mitral regurgitant murmur would be present. Owing to such an extensive dilatation of the left ventricular cavity, you might have a mitral regurgitant murmur which would escape detection. The patient improved in the course of a week under treatment, which was, infusion of digitalis, morphine and nitroglycerine with diuretics, the nitroglycerine with digitalis to counteract the tendency of digitalis to contract the arterial vessels, and thus relieve the distressing condition that might be caused in this way. There was little effect on the kidneys by this treatment. He was passing about four or five ounces of urine every twenty-four hours; specific gravity, about 1023, heavily loaded with albumen; few epithelia from the bladder and pelvis of the kidney, but no casts. He was given calomel according to the method of German physicians, when administering it as a diuretic in cardiac diseases, that is, giving three grains three times a day until six doses are taken, then wait. This was taken in this way, and at the end of the second day the kidneys began to act freely, and after the third or fourth day he passed four quarts of urine in twenty-four hours. Inside of four days the œdema was out of the lungs; the liver had assumed its natural proportion, swelling of extremities disappeared, and the patient was feeling comfortable. Treatment directed toward his heart, and to improve his general condition, was continued. He did not gain in strength, and had periodical relapses into his former condition, with return of the œdema of the extremities, enlargement of the liver and extension of the dilatation of the heart, with scanty secretion of urine. These attacks were preceded by distress in the stomach and symptoms of biliary

*Read before Chicago Pathological Society, October, 1892.

colic ; they were relieved only by the administration of the calomel. These attacks were preceded by marked arhythmia of the heart and accompanied also by marked Cheyne-Stokes respiration. During the early part of my attendance he was seen by Dr. J. D. Skeer in consultation, who suggested contracted kidney as the cause of the cardiac condition, and while disease of the kidneys was the only reasonable explanation, the efficient action of these organs obtained under treatment, made it rather uncertain. He suffered three or four relapses, and was under treatment nine months, and finally died from failure of the right ventricle, there being non-synchronous contraction of the ventricles prior to death, and at the time of death there was very little œdema, only such as one would naturally expect. The kidneys were acting fairly well until two days prior to death, when they gradually ceased their action as would be expected from a failing heart. The Cheyne-Stokes breathing was only present during the attacks above alluded to, and was not present for three weeks prior to death.

The autopsy was made with the assistance of Drs. J. D. Skeer and Geo. H. Cleveland sixteen hours after death, and showed that the body was fairly well nourished.

Autopsy sixteen hours after death: Body fairly well nourished, *rigor mortis* not well marked. There was no fluid in the pericardial sac, the left pleural cavity contained about a quart of clear fluid, the right pleural cavity was empty. A firm band of old adhesions about two inches wide connected the chest wall and middle of right lung. The lungs were much congested, and the seat of brown induration almost black in places, very firm and indurated in spots, as from connective tissue induration subsequent to hæmorrhagic infection, or catarrhal pneumonia ; lungs œdematous in lower portions, especially the left.

Heart weighed 22½ oz., hypertrophy of all muscular structures of heart, and dilatation of all cavities, granulo-fatty degeneration of muscular tissue. Mitral ring stretched, papillary muscles much thickened, and retracted, preventing closure or mitral valves. Mitral valves slightly thickened. Aortic and pulmonic valves were healthy. Tricuspid opening slightly stretched. A long firm white thrombus in right venticle stretched back into right auricle, and required some force to detach it from papillary muscles ; a small softer clot in left ventricle ; both ventricles and right auricle were filled with clotted blood.

Liver enlarged, firm and seat of fatty degeneration and moderate cardiac cirrhosis. Gall bladder distended with dark green bile, ducts patent. Stomach congested, slightly dilated. Pancreas enlarged, congested and very hard.

Right kidney weighed 8½ oz., of normal consistency and appearance, capsule non-adherent ; ureter larger than normal. Left kidney weighed 1½ oz., capsule very much increased in thickness, impossible to separate it without tearing kidney tissue. Kidney itself very hard, contained in cortical portion several small cysts filled with an amber colored fluid, ureter very small.

Dr. Skeer questioned the patient one morning as to his ever having had syphilis, and he said yes ; but in talking to him afterwards it was evident that he misunderstood the doctor ; that he understood him to mean any kind of venereal disease. He had had gonorrhœa and admitted it, but he denied ever having syphilis.

An examination of the specimen shows that the aortic valves are intact. It was opened between the junction of the two cusps of the valve, so that they are not destroyed. The mitral ring is considerably stretched and the valves are retracted, and it was rather difficult to state whether they have been the seat of more or less inflammation. Of course, they are thickened and retracted, but that might be due to the thickening and retraction of the ring and papillary muscles. The wall is much thickened, and the cavities are all dilated. The right kidney is of no particular interest except that it is enlarged. In the left kidney there were several cysts. They were not opened, and they have dried up a good deal.

These cysts are here found in their usual situation, that is in the cortical portion, especially near its surface. This kidney is a marked example of the small red kidney—chronic interstitial nephritis, the marked thickening of the capsule, and the direct connection of the capsular connective tissue with that of the cortical portion is very marked. The decrease in the cortical substance, especially that between the pyramids, is more marked than is usually found ; the pyramids themselves have diminished considerably in

size as the result of connective tissue increase in the medullary portion, a somewhat infrequent occurrence. It is possible that there was entire functional inability of this organ for a long time, which might explain the absence of the usual evidences of disease found in the urine.

A point of interest in this case was the diagnosis. It was evident the man had an hypertrophied and dilated heart, but it was not evident as to what that was due. There evidently had been hypertrophy of the right ventricle which had taken considerable time in developing, and of course there must have been a cause for that. The aortic valves were intact; there was no regurgitation or stenosis; there was no apparent sclerosis of the arteries; there was nothing that one could find which would explain the enlargement of the heart, unless it might be contracted kidney. After administering remedies to him and finding the secretion of urine was so free, and that it went on with the improvement of the circulation for months without any special trouble, there was no room to suspect that there was anything wrong with his kidneys. There was no evidence of any kidney disease by examining the urine, except occasionally traces of albumen, which will show in any case of congestion of the kidneys from deficient circulation.

Another point: It is evident that the enlargement of the heart would come under that head designated by Fraentzel as idiopathic enlargement of the heart. It is due to some cause extraneous to the heart, obstruction to the circulation in the kidney, or some other agent; excessive consumption of food and drink, for instance, might cause idiopathic enlargement of the heart by increasing vascular tension. This case might be classed as one of idiopathic enlargement. How long this condition of the kidney might have been developing it is hard to say; but no doubt it was excited years prior to the man's death, or it may have developed in early life. How long a man would live with one kidney; how long it would take to produce that amount of enlargement of the heart which we see in this case and its consequent failure are very interesting questions. It is possible the trouble with the kidney might have begun in early life. It is also possible that it might have been a matter of only five or six years back. Certainly, it would take five or six years for a heart to develop the condition of hypertrophy developed in this case, with the consequent degeneration and dilatation. In aortic stenosis, which gives us the form of hypertrophy more nearly allied to this than anything we can think of, we might have a heart running for a period of thirty or forty years before it reached the condition of degeneration and dilatation which obtained in this man. The compensation effected by the right kidney is an interesting fact, as it must have done double duty for a long time, and while under my observation I think the entire function devolved on this one organ. In no other way can I explain the lack of evidence of kidney disease usually obtained by examination of the urine. I do not think the left kidney excreted any urine during the nine months in which the case was under my observation.

This case is also instructive in showing how much may be done in prolonging life in these cases under very adverse conditions.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 9, 1891.

THE PRESIDENT, JOHN B. ROBERTS, M. D., IN THE CHAIR.

DR. A. B. KIRKPATRICK read a paper on "The Medical Treatment of Appendicitis" (see page 84).

DISCUSSION.

DR. CHARLES P. NOBLE: I arrived a little late, but I understand that reference has been made to a case which I saw in consultation. It was undoubtedly a case of intussusception. The case illustrates the fact that occasionally a patient will recover from this condition by sloughing of the bowel. It also illustrates the difficulties of diagnosis of the cause of peritonitis when the surgeon is called in late. The boy had been sick for nearly a week when I saw him. There was evident obstruction of the bowels, with fæcal vomiting, and there was undoubtedly well-marked peritonitis; and the history indicated that the peritonitis had arisen in the right iliac region. The question was whether the case was one of appendicitis or one of intussusception. The physicians in charge were inclined

to regard it as a case of appendicitis, and and I agreed with them, as the symptoms of invagination were absent; yet I must say that I felt that intussusception through the anus, but it was so high that my finger barely touched it, and I was not sure that it was not a fold in the bowel.

It is fortunate for that boy that our advice was not followed; for if he had gone to the hospital and been operated on in the condition that he was in, the chances would have been much in favor of a fatal result. At the same time, I think that it would be exceedingly dangerous to argue from such an exceptional case any general rule of practice. The recoveries in this class of cases, where the bowel is allowed to slough away, I think, does not exceed two or three per cent.

Dr. T. S. K. Morton: The first case reported is of interest from the fact that it was a well-marked case of intussusception, and yet the classical symptoms of this condition were absent. There was no passage of blood with the stools, and there was absence of rectal irritation. The condition was about as marked as it possibly could be, and yet a diagnosis apparently was not possible.

I think that the position of the surgeon in regard to appendicitis is often misunderstood, especially by the mere medical practitioner. So far as I have seen, the surgeon is not anxious to operate, and the cases not operated on vastly exceed those in which operation is done.

With reference to the constipation of appendicitis, I think that where the bowel cannot be moved by any procedure either from above or below, the case is exceedingly unfavorable for recovery, with or without operation; whereas, if the bowels can be moved, the prognosis becomes much more favorable. If, after the bowels are freely moved, the symptoms subside, I look upon the case as one that will probably not require operation at that time. If, however, there is only temporary amelioration of the symptoms, or none at all, the case is one for operation.

Dr. William S. Stewart: I am not satisfied that the cases reported should be regarded as true cases of appendicitis. There was evidently impaction of the ascending colon in all five cases, due, no doubt, to inflammatory action; but it is evident that in these cases operation was not justifiable. First remove the impaction, and then if there is an aggravation of the symptoms, the imflammation becoming more marked, it is then time to consider the propriety of surgical treatment.

Dr. Kirkpatrick: I am sorry that no one has attempted to throw light upon the subsequent course of the first case reported, as to whether the typhoid condition which followed was due to the inflammatory trouble or was a true typhoid fever.

I should not like to be considered, in this paper as not favoring operation in proper cases. The point which I wish to make is, that I fear in some cases the physician does not take the proper means to open the bowels before resorting to operation. I fully agree with what has been said as to the unfavorable prognosis of operation in cases where the bowels cannot be moved at all.

I think the criticism of (I believe) Dr. William S. Stewart hardly just or tenable. I understood him to say that he did not believe the cases reported were true cases of appendicitis—only obstruction of the bowel. I took particular care not to report in detail the cases in which I relied upon myself for diagnosis, but based my treatment upon the diagnoses of Drs. Keen, Noble, Wheeler, Dripps, and David Stewart.

I think we must admit that they are careful, skilful men, and capable of making a correct diagnosis.

THE STREAM OF IMMIGRATION.

Reports to the State Board of Health, from the Sanitary Inspector in charge of the inspection of immigration to exclude dangerous diseases, at Port Huron, for the two weeks ending December 19, 1891, show opportunities for the introduction of such diseases, by immigrants from many different countries, passing through Michigan to States beyond. The numbers and nationalities of the immigrants inspected were as follows:—6 Arabs (from Jerusalem), 14 Austrians, 8 Belgians, 27 Bohemians, 49 Danes, 84 English and Scotch, 1 Finlander, 34 French, 97 French Canadians, 204 Germans, 20 Hollanders, 10 Hungarians, 6 Irish, 101 Italians, 209 Norwegians and Swedes, 66 Poles, 12 Russians, 36 Russian Jews, 2 Servians and 5 Swiss.

The destinations of these immigrants were mainly "Chicago and the Northwest." A few of them went to Saginaw. All the French Canadians were from the province of Quebec.

SELECTED FORMULÆ.

CHOLELITHIASIS.

Dr. Huchard (*Centralblatt für d. ges. Therapie*, No. 8, 1891) recommends :

℞
Natrii benzoici, } āā gm. v.
Natrii salicyl, }
Pulv. rad. rhei, }
Pulv. nuc. vomic., gm v.

Sufficient for twenty capsules. One capsule at eve y meal.

ODORLESS IODOFORM SALVE.

The following (*Centralblatt für d. ges. Therapie*, No. 8, 1891) is suggested :

℞
Creolin.....grammes j.
Iodoformi..... " ij.
Vaselin..... " xxv.

BEJEAN'S GOUT CURE.

According to the *Pharmaceutische Centralhalle*, this remedy has the following composition :

℞
Oil of wintergreen .....parts v.
Extract of gentian..... " v.
Iodide of pot ssium..... " iv.
Sodium salicylat ..... " iv.
Alcohol..... " xx.
Water..... " lxxx.
M.

LAXATIVE.

℞
Ext Colocynth Co.....ʒ j.
Ext. Hyoscyam.
Aloes Pulv. Soc.....āā grains x.
Ext. Nucis Vomicæ ..... " iij.
Podophylli
Ipecac.....āā " j.
Make twelve pills. Sig. One at bed-time.

—*Weekly Med. Rev.*

FISSURES OF THE TONGUE.

The following (*Lo Sperimentale*, No. 14, 1891) is recommended :

℞
Acid carbolic.....grammes 2.5.
Tinct. iodii } .....āā " 12.5.
Glycerine }

INFANTILE INSOMNIA.

M. Huchard gives the following :

℞
Urethane..... gramme 0.20
Aquæ tiliæ destillatæ.
Aquæ aurantii flavæ.
Syrupi simplicis.....āā grammes 20 00.

M. Sig. A dessertspoonful every two hours in a wineglassful of water.

—*Journal des Sciences Médicales de Lille*, August 14, 1891, p. 166.

FOR PELADA.

Water of ammonia.....1.
Rum.....3.
Decoction of walnut leaves.....40 to 60.
Use as a lotion.

TO PREVENT THE PITTING OF SMALL-POX VESICLES.

Dr. Bertrand (*Gaceta Sanitaria de Barcelona*, July, 1891) recommends :

℞
Acid boric.....grammes 4.
Amid. glycerolat..... " 50.
Apply immediately after the eruption appears.

TOPICAL APPLICATION IN DIPHTHERIA.

Dr. Ernest Timmermann writes in *The Medical News* that he has used with signal success the following formula as a topical application to the throat in the treatment of malignant diphtheria :

℞
Acid sulphurosi.....f ʒss.
Liquor potassæ.....gtt xl.
Aquæ calcis.....ad f ʒiv.

Mix, filter ; keep well corked in a cool place. To be applied topically to the throat by means of a sponge, probably every hour or two.

CONSTIPATION IN INFANTS.

Calcined magnesia,
Powd. rhubarb,
Oleosaccharum of anise, aa 5 parts.

Administer a pinch of the above three times a day in the constipation of children of 1 to 2 years old; if the infant is only s me weeks old, make both the rhubarb and magnesia 3 instead of 5 parts. [The oleosaccharum is made by intimately mixing one or two drams of the essential oil of anise with one ounce of finely powdered sugar.]

GONORRHŒA.

Dr. Netzetzky (*La Independencia Medica*, No. 42, 1891) uses the following injection in gonorrhœa :

℞
Balsam copaibæ ..... grammes 4.
Vitell. ovi, ... No. 1.
Aq. destillat ..... grammes 180.
f. emuls. et adde :
Ext. belladon. } .....āā dgms. 5.
Zinci sulfat. }
Aq. laurocerat .... dgms. 4.
Inject into the urethra four times a day.

Of service in all forms of gonorrhœa.

FOR RHEUMATISM AND LUMBAGO.

Hollister gives the following in doses of 1 teaspoonful three or four times a day :

℞
Potassium iodide,.....grammes 15.
Potassium bromide..... " 15.
Tincture of colchicum seed... " 30.
Syrup of bitter orange-peel... " 50.
Distilled water..... " 150.
M. S g The dose should be augmented until the bowels are moved.

—*National Druggist*, September 15, 1891.

ASTRINGENT GARGLES.

The *American Journal of Pharmacy* gives the following formula for Goddard's astringent gargle :

Fol. rosæ rub.....2 dr.
Aquæ bullientis.....5 oz.
Acidi sulphurici dil.....½ dr.
Infuse, when cold strain, and add
Mel. despumati.....1 oz.
Acidi tannici.....2 scr.
Aluminis.....2 dr.
Spir. vini rectifi ati } .....āā 6 oz.
Aquæ rosæ }
M.

Another gargle is as follows :

Red rose petals.....2 dr.
Pom egranate rind.....4 dr.
Boiling water.....6 oz.
Infuse, strain, and add
Alum.....2 dr.
Clarified honey .....1 oz.
Mix, filter.

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LEADING ARTICLE.

NEURASTHENIA, AND ITS RELATIONS TO MENTAL DISEASES.

No subject within the entire range of medical science should demand more careful study at the present day than the protean-symptom-group we call neurasthenia. Apart from the fact that in the eastern and northern parts of this country it is probably the most prevalent of all diseases, it should also be remembered that it has been called the "American disease," by Beard, who, in 1868, described the conditions of nervous exhaustion under this collective name, and who also wrote that its development was directly due to "modern civilization."

We all have realized how frightfully common it is, and know that its expression is more varied than even the manifestations of "*malaria*," and surely no other disease exists which is of more practical importance to the general practitioner, for it rests almost solely with him whether neurasthenia shall "increase in the land." It is the general practitioner, the family doctor, who has the rarest opportunities for studying the beginning of these symptoms of lowered nervous tone, and who, therefore, must be most practically interested in their prophylactic and curative treatment, as well as in understanding, as far as our knowledge makes this possible, their real nature or *pathology*.

Is it too much to say that the treatment of neurasthenia requires more experience, judgment and fine tact than does that of any other known disease? If this is so, and in our opinion it is at least very nearly so, certain accurate knowledge is essential to their proper understanding of any given case, for only upon correct ideas as to the real state of the nervous system exhibiting these varied symptoms can a useful therapeusis be based. It is, therefore, most desirable that every physician should, as far as possible, appreciate fully the meaning of every symptom

which may herald neurasthenia, so that in a very large proportion of cases its dangers can be averted. We fear that sometimes, we hope not often, deplorable results follow, because the physician in charge of the case disregarded, overlooked or neglected to give proper weight to early neurasthenic symptoms.

So far, we have considered simple neurasthenia, or the symptoms of nervous exhaustion, but greater interest still attaches to this subject when we come to consider the relations which nerve exhaustion bears to definite diseases of the mind. Are melancholia and mania, and other common varieties of insanity frequent sequences of neurasthenia? What proportion of neurasthenics become insane? What proportion of the insane first suffered from neurasthenia? Does insanity become more prevalent in proportion to the prevalence of neurasthenia? These and many other questions naturally occur to us.

Having endeavored to indicate a few of the reasons why neurasthenia should be of special interest to the general practitioner, it is our purpose to briefly sketch the subject as its literature reveals it to-day. Space will not permit of more than a brief synopsis of some of the latest and most important thoughts.

Among the most valuable recent contributions to this subject, perhaps that of Dr. Edward Cowles (The Shattuck Lecture. Medical Communications of the *Massachusetts Medical Society*, 1891) can be justly called the most thorough and complete, especially in more clearly than hitherto defining the relations which neurasthenia has with unmistakable mental diseases. The author of this valuable paper has had, from his wide experience as chief of the McLean Asylum at Somerville, Mass., the most ample opportunities for the careful study of this affection, and his large experience and scholarly attainments add weight to his words. He regards neurasthenia as a real pathological condition of the nerve centres due *primarily* to overstrain, fatigue, etc.; *secondarily* to the exhaustion of other diseases; and *hereditarily* to various exciting causes acting upon unstable cell nutrition. The underlying cause of the lowered nutritive activity of the cell protoplasm he mainly regards as an auto-intoxication from waste toxic products, the result of over-functional work, or of disorders of the eliminating functions of the body, or of unstable metabolic action from bad heredity. In support of these views of the etiology and pathology of nerve exhaustion, the author goes exhaustively into the chemistry and physiology of the nervous mechanism, and also adduces all the recent proof which goes to show that auto-intoxication of the organism is more than probable in the conditions under consideration. This part of his work he sums up as follows: "The study of the general organic mechanism, so far, shows that it may be conceived as made up of many minor mechanisms which may be studied as represented by their activities. Some general truths have been reached in regard to all of them as to their structure, their co-ordinations, and the results of their functional exercise. These conclusions are in support of my first proposition, to the effect that when the mechanism is put into use, physiological activity and toxicity always occur together, and that the condition thus jointly produced has its first expression in normal fatigue. Moreover, it appears that in pathological or nervous exhaustion, which constitutes neurasthenia, there results a condition of "excessive irritability and weakness" of the nervous system. There is also, in acute neurasthenia, always an increased toxicity, by its accumulation in fatigued areas, and often by general fatigue and auto-intoxication through disordered nutritional processes."

Having thus concluded regarding the pathology of nerve exhaustion, he next demonstrates that there are mental symptoms by which we may know the degree

of nervous fatigue and "auto-intoxication of the nerve and muscle elements," as a "guide for diagnosis, prophylaxis and treatment." Dr. Cowles says: "My observations in the treatment of insanity have given me the conviction that in the commonly occurring and typical forms of mental disorder, which are of a functional and curable character, nervous exhaustion always plays an important part, both in the attending conditions and the causation." He strongly insists that the mental symptoms of neurasthenia being the earliest, are far more important, and better guides to treatment than the purely physical ones, and his treatment is based upon the recognition of the state of the nervous system from a careful study of the mentality of the patient. His treatment of the objective symptoms includes elimination, nutrition, rest, exercise, massage and the promotion of sleep.

Dr. Dana, of New York, has recently given us a good definition of neurasthenia. (Neurasthenia. *The Post Graduate*, January, 1891.) He says: "Neurasthenia is a morbid condition of the nervous system, whose underlying characteristics are excessive irritability and weakness; a condition in which the nutrition of the nerve cell is primarily at fault."

It is now a well recognized fact that neurasthenia may confine itself to a limited area of the nervous system, hence we have the subdivisions of cerebrasthenia and spinal neurasthenia, with their legions of symptoms, chiefly subjective. Among the objective signs of the neurasthenic condition, Dr. B. Sachs lays stress upon the following: tremor of the face, tongue and hands, and exaggeration of the knee-jerk. (Clinical Lectures. *International Clinics*, April, 1891.)

There can be no doubt from the mass of available evidence that neurasthenia and actual insanity possess, in general terms, the same etiology, and that the former may, and very commonly does, merge gradually into the latter. It is a nice question, sometimes, to decide between ordinary acute melancholia and the mental depression which accompanies certain forms of neurasthenia, and probably the formation of delusions of persecution, or that the patient is being punished for imaginary crimes, constitutes the most really practical guide towards a decision in such cases.

The treatment of these neurasthenic states is certainly most important in view of their natural tendency towards grave mental disease. It will often prove the prophylactic treatment of insanity. The success of any treatment depends mainly upon the recognition of the state of the nerves' mechanism, as shown, first, by the mental symptoms, and secondly, by the subjective sensations and objective signs which the patient presents. Routine treatment of these cases (with strychnine, phosphorus and the various tonics, the rest cure, massage and electricity, foreign travel, etc.) is to be deprecated, for only will the needs of each patient be ascertained after a careful study of the type and degree of the nervous exhaustion based upon a thorough understanding of the real state of the nerve elements, as shown by the mental symptoms, together with the condition of bodily nutrition; and, in all cases, it is our duty to endeavor to find out exactly what is interfering with nutrition. No subject within the scope of medicine is at times more perplexing than the treatment of neurasthenia, nor does any other disease offer greater inducements for the proper solution of the problem of treatment than nervous exhaustion.

The practical lesson which the recent researches concerning the essential pathology of nerve exhaustion should teach, seems to be that we should give increased attention to the *mentality* of neurasthenics, since it is the earliest and most valuable guide, according to high authorities, to a correct appreciation of the nature and degree of the nervous malady; and, also, that the treatment of such states must be varied to suit individual

cases, and the existing conditions of digestion, assimilation, cellular metabolism, elimination and excretion of toxic waste products.

The intimate relation of nervous exhaustion to insanity, on the one hand, and to neurasthenic symptoms on the other, plainly indicates that in all probability they are simply links in one pathological chain of events, and that many cases of insanity spring directly from neurasthenic soil, whether hereditary or acquired. Through the recent brilliant results obtained by the experimental chemist and physiologist, some of the shadows which obscure the pathology of neurasthenia have been cleared away, and enough is positively known to indicate that there is for nervous exhaustion always a definite pathological anatomy, and that this consists of certain changes in the nerve cells, due to the effects of the toxic products resulting from their pathological activity.

CORRESPONDENCE.

PROMISCUOUS SPAYING OF WOMEN.

DR. NOBLE'S REPLY TO DR. TODD.

EDITOR MEDICAL AND SURGICAL REPORTER:—It is much to be regretted that Dr. Todd in his communication in the last issue of the REPORTER has followed the lines of his previous letter. He reiterates his statements, but fails to furnish any evidence in support of them. He is silent even with reference to the real nature of the four cases of removal of the uterine appendages which have come under his own notice. The only new point presented is that a woman, the mother of four children (whether with healthy or diseased ovaries the Doctor does not state, although presumably they are healthy), has consulted him with reference to having her ovaries removed in order to avoid further pregnancies, and that in spite of his advice to the contrary, she persists in her intention, and expects to get some surgeon to do her bidding, because she can pay for it. Also, that the woman knows several other women who have "gone through the operation." Nothing is said as to the nature of the indication in these cases, whether tumor, abscess, or chronic salpingitis. It is not stated that any one removed this woman's healthy (?) ovaries, or agreed to remove them, but simply that the woman intended to have it done. Yet the Doctor says that this fact proves conclusively to him that there are certain parties who follow the profession of the promiscuous spaying of women! It is scarcely necessary to point out that the evidence required to convince him is not great.

Dr. Todd says that his criticism applies to "a certain class of ambitious young surgeons." Here again he gives no reason for stating that ambitious young surgeons do other than justifiable operations; hence the statement does not require special comment.

As was stated in my last communication, my object in writing it was not to criticise Dr. Todd, but to protest against the baseless assumption of not a few members of the profession that healthy ovaries are being removed by operating gynæcologists, and further, to protest against the present fashion of making loose statements concerning this subject. This whole matter is a very serious one for the profession and for sick women; and every candid and fair man must desire that it shall be approached, not from the standpoint of mere opinion, which may be only prejudice, but from the judicial or scientific point of view, in which truth is the only object, so that a conclusion can be reached upon evidence which is satisfactory to every mind.

It seems curious that this subject now should agitate the minds of many members of the profession in general, when it has been settled practically by gynæcologists themselves. Some years ago, following the lead, but not the moderate practice, of Battey, surgeons removed many healthy or slightly diseased ovaries for various mental and nervous diseases, supposed to be connected with menstruation. The results obtained, as might have been expected, were such as to cause the older gynæcologists to operate on such cases only after the failure of all simpler measures, and then only under strict limitations. This experience of the older men has been of immense advantage to younger men in enabling them to escape this error in practice. Besides, our knowledge, or rather ap-

preciation, of the pathology of pelvic inflammation has undergone a complete revolution within the past ten years, which has been of the greatest value in giving gynæcologists to-day a rational basis for their therapeutics.

Had the letter of Dr. Todd, and similar communications, been written ten, or even five, years ago, they would have assisted in bringing about the principles of practice which the good sense of gynæcologists has caused them to adopt.

The fact that a woman consulted Dr. Todd with the object of having the ovaries removed to escape future pregnancies is worthy of careful consideration. It seems to me that an operation done for such a purpose would be malpractice. The only ground on which it could be justified would be in case of serious pelvic deformity, making delivery *per vias naturales* dangerous or impossible. But the modern Cæsarean section, done at or just before the beginning of labor by an expert surgeon, is so safe that even here the indication is very questionable.

Very respectfully yours,
CHARLES P. NOBLE, M. D.

NON-MENSTRUATING PLURIPARA.

EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—On page 834 of REPORTER, of volume lxv, Dr. Marion Dunagan quotes a case of a colored woman who had never menstruated, who was the mother of ten children. Will you allow me to report the following: In 1878, I attended a Mrs. D—— in her sixth confinement. She stated to me, and her husband confirmed the statement, that she had never menstruated and never wore a guard. She sent for me a month before delivery, believing herself at full term, stating that she "did not know for a certainty when she was at full term," owing to the fact that the usual data were not present to date from. Afterward she gave me in a vial two ova, unruptured, which she had found on her night dress.

I believe Dr. Dunagan is right as to menstruation and ovulation not occurring at the same time, and that neither are dependent on the other. I have a record of eleven cases where connection was not had with the woman until fourteen or fifteen days after menstruation and for a month prior to it, and still conception took place. In two other cases women have shown me the perfect ova which have been thrown off sixteen or twenty days after menstruation—they not knowing what "the little pellets" were.

I have no doubt but that numbers of physicians have met such cases but thought them of not sufficient importance to report.

Incidentally, I may state that I know also of a case where a lady of eighty-three who menstruated regularly every two months, the same as when she was a young woman. She had never menstruated every month as is usual.

BEN. H. BRODNAX, M. D.
Brodnax, La.

DR. E. W. CAMPBELL'S ARTICLE ON "ELEMENTS OF THOROUGH DIAGNOSIS."

EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—Dr. E. W. Campbell in his article in the Dec. 26th issue of the REPORTER, entitled, "Elements of Thorough Diagnosis," affords a remarkable example of the fact that certain impressions transmitted by the optic nerve, under certain conditions, can so influence the brain as to make it reproduce the same impressions on some other occasion with the belief that they are original. The case above cited is remarkable in that the ideas of the article and the language by which they are expressed are identical with part of the introduction to Da Costa's "Medical Diagnosis."

I feel obliged to the author of the article for placing in my hands so convenient a copy of the instructions of the great Da Costa.

Respectfully,
J. F. STEWART, M. D.,
Griffen, Ga.

CONSTIPATION.

In a lecture on Constipation, the eminent authority on therapeutics, Prof. Dujardin Beaumetz, described Villacabras as the most highly concentrated purgative water known. Its usefulness seems to be by no means limited to the field which is occupied by other waters. Its action is not succeeded by the annoying constipation that usually follows the administration of other purgative waters. An ordinary wine glass of Villacabras, taken before breakfast, produces a soothing effect upon the bowels and results in a natural movement within two or three hours.

BOOK REVIEWS.

THE COMPARATIVE ANATOMY OF THE DOMESTICATED ANIMALS. By A. CHAVEAU, M. D., LL. D. Second English Edition. Translated and Edited by GEORGE FLEMING, C. B., LL. D., F. R. C. V. S. 8vo, pp. 1084, 585 illus. New York: D. Appleton & Co. 1891.

This edition is a translation of the fourth French edition, issued last year. In the present volume, numerous alterations, additions and illustrations have been made in order to render it fully up to the requirements of a text-book and standard work of reference. The chief additions are on the anatomy of the ass, mule, rabbit and camel, and one hundred and thirty new illustrations. The pages have been enlarged, and the letter-press substantially improved. There is also a copious index, which is not found in the French edition.

Chaveau's work has long since attained a position second to none in the field it is intended to cover. In this new edition, the student of veterinary and comparative anatomy will find a work accurately written, fully illustrated and generally admirably adapted to his wants.

EVIDENCES OF THE COMMUNICABILITY OF CONSUMPTION. By G. A. HERON, M. D. (Glas.), Fellow of the Royal College of Physicians of London; Physician to the City of London Hospital for Diseases of the Chest. 8vo, pp. 163. London and New York: Longmans, Green & Co. 1890.

During the winter of 1889, Dr. Heron delivered two lectures at the London Hospital for Diseases of the Chest, on "The Question of the Communicability of Consumption." These lectures met with such approval, and were of such value for reference, that he has been induced to put them in book form.

The death-rate from tuberculosis is so appalling that anyone offering facts which will serve to diminish it, must be looked upon as a public benefactor. Certainly the lectures before us entitle the author to such a recognition.

In the book, the wording of the original lectures has been somewhat modified, additions have been made, but the colloquial style of the lectures preserved. We find chapters on the researches of Koch concerning tuberculosis, the evidences of the connection of specific bacteria with the disease, the haunts of the bacilli, the evidences showing the communicability of consumption, milk and meat as sources of infection, prophylaxis, etc. There is also a valuable appendix by Dr. Frosch, of Berlin, prepared under the direction of Professor Robert Koch, giving references to recent contributions on the infectiousness and contagiousness of this disease.

Dr. Heron is a firm believer in the bacteriological origin and contagiousness of consumption, and his facts have been presented so clearly and convincingly that one cannot read his work without feeling that he has built upon an indestructible basis. The book is of such a character as will interest every one having the welfare of the community at heart, and who desires to prevent the spread and continuance of this terrible scourge of mankind.

PERISCOPE.

THERAPEUTICS.

THE HYPNOTIC ACTION OF THE ANTIPYRETICS.

In the *Deutsche Medizinal Zeitung* for June 5, 1891, Professor Bernheim calls attention to the great similarity in action of the so-called antipyretics,—quinine, salicylic acid, antipyrin, antifebrin, phenacetin, etc.,—not only in their antithermic, but also in their hypnotic action. When the favorable action of salicylic acid in rheumatism was first observed, it was designated as a specific for this affection, but experience has taught that the other antithermic remedies produce a favorable effect likewise in the same manner,—that is, they diminish articular pain without influencing the course of morbid processes itself. According to Bernheim, the connection between antithermic and analgesic action is the following: Fever originates through the absorption into the blood of pyrogenic substances, which act as stimulants to the heat-centres, and reduction of temperature can be produced by the elimination of these pyrogenic substances or by direct action on the heat-centre. If the antithermics were capable of actually destroying the ferments in the blood they would then act as abortive agents. This is, however, not the case, according to Bernheim, who will not even admit a specific action for quinine in the case of malaria, since he maintains that the

action of this substance on the disease is merely due to its antithermic properties, which are possessed in almost equal degree by the other antithermics. He concludes that the different antipyretics, quinine and salicylic acid included, only produce their action either through antithermic influence on the cerebral centre, and that a distinct antipyretic action within the organism has never been demonstrated. He likewise maintains that the analgesic action is in close connection with the antithermic action, and likewise is produced by influence of nerve-centres, which are probably included in the gray substance of the cortex. In fact, Bernheim states that by the æsthesiometer he has succeeded in producing marked reduction in the sensibility of the skin after the exhibition of quinine. According to this, therefore, the antipyretics are only indicated in fevers in the height of temperature, or when they are to be employed for the reduction of abnormally increased sensibility.

CORNUTIN AS A HÆMOSTATIC IN HÆMORRHAGES FROM THE BLADDER AND FEMALE GENITALS.

Dr. Wilh. A. Meissels (*Wiener med. Presse*, No. 42, 1891) recommends cornutin muriate or citrate as an efficacious hæmostatic in vesical and uterine hæmorrhages. It may be administered subcutaneously or by the mouth. It is equally efficacious in males as well as in females. The dose employed was one to one and a half centigrammes (one-eighth to one-fourth of a grain) a day. It is easily taken and supported by the stomach.

CHLORIDE OF AMMONIUM IN INFLUENZA.

According to the Paris correspondent of the *Lancet*, at a recent meeting of the Academy of Medicine, M. Marrotte advocated the use of chloride of ammonium in the treatment of epidemic influenza in preference to sulphate of quinine, as urged by M. Gellié, of Bordeaux, in his recent paper read before the academy. M. Marrotte speaks very highly of the results obtained by chloride of ammonium, the advantages of which over quinine he claims to be that it is much cheaper, more rapid in its action, and brings about a more complete and definite cure. It is more especially in those forms of the disease which are complicated by pulmonary congestion or inflammation that chloride of ammonium will be found serviceable. From 50 to 80 grains may be given in twenty-four hours in the form of 8-grain powders, which may be conveniently concealed in a wafer. As the treatment of influenza is, unfortunately, like many other therapeutic problems, a very open question, perhaps some of your readers on your own side of the channel, whose opportunities just now are only too unlimited, might put the drug to the test and record their experience.

HYDROTHERAPY IN THE TREATMENT OF DIPHTHERIA.

The whole body of the child from the neck down is enveloped in a Priessnitz pack. This is removed at the end of three hours and the whole body rubbed off with cool water. After this, the body is again enveloped in the Priessnitz pack from the neck to the hips. These packs are renewed about every fifteen minutes during the following hour or two.

This whole procedure repeated twice, so that the child lies in a constant sweat from six o'clock in the morning to twelve o'clock at night. To promote diaphoresis, elder-tea and cognac in sugar water are freely administered.

From midnight until six o'clock in the morning, the child is allowed to rest, only a small Priessnitz pack enveloping the neck. Internally, chlorate of potash (2 per cent.) is administered.

This treatment usually causes the membrane to disappear within from two to four days. The fever and the bad smell as a rule vanished on the second day. The more copious the perspiration, the more rapidly does the membrane loosen.

Out of 117 cases of diphtheria treated as above described, 14 died. Tracheotomy was required in 9. The time spent in the hospital varied from six to eight days for each case.

As a theoretical argument in favor of the sweat treatment, it may be stated that it augments pressure of the secretion in the mucous glands, thereby loosening the false membrane, which is especially held in place by the fibrin net sunk into these glands. Moreover, the stimulation of the lymphatic circulation promotes the elimination of the poisonous elements from the body.—*Blat. f. Klin. Hydroth.*

TREATMENT OF ANGINA PECTORIS BY COCAINE.

In a paper in the *Revue de Médicine*, the use of cocaine is strongly recommended in angina pectoris, in doses of one-half to one-third of a grain three or four times daily. He quotes four cases of this disease which were benefited greatly by this treatment. If the attacks do not cease immediately after taking the remedy, they completely yield to it, however, in about three days. Under its use the pulse becomes slower but fuller, and the quantity of the urine is augmented. The author refers to some observations previously made by him, which appeared to show that the inhalation of oxygen in this disease did much good; he therefore suggests that it should be tried in conjunction with the internal administration of cocaine.—*Med. Chronicle.*

A NEW TREATMENT OF GRANULAR CONJUNCTIVITIS.

The usual treatment of granular conjunctivitis consists in turning back the eyelids with the fingers, and then cauterizing the portion of the conjunctiva thus exposed with the sulphate of copper. This daily cauterization is extremely painful, and does not produce cure until after many weeks of severe suffering, and sometimes did not prevent absolute blindness.

At the meeting of the Académie de Médecine, held on August 4, 1891, Dr. Abadie described a method in the first place of completely everting the upper eyelid so as to expose the superior conjunctival cul-de-sac (*La France Médicale*, August 7, 1891). In the ordinary method of procedure it is this part of the superior cul-de-sac which is never exposed, and which is ordinarily a veritable focus of infection. To accomplish this complete inversion of the eyelids special instruments are necessary, and the patient must be chloroformed on account of the severe pain produced by this manœuvre. The eyelid is seized with forceps, and then rolled twice upon itself, or, in other words, rolled twice completely around the forceps, so as to completely expose the superior conjunctival cul-de-sac, which is then scarified freely with a bistoury, and a fairly hard tooth-brush is then dipped in a solution of corrosive sublimate, 1 to 500, and the raw surface vigorously brushed with this solution. This procedure is only required once, and then on subsequent days the eyelids are simply everted in the ordinary manner and the conjunctiva bathed with a solution of sublimate. The author states that this method of treatment may be applied to all cases, no matter what may be the existing degree of complication, and that its efficiency is the more marked the more serious is the case.

Dr. Guaita recommended first the use of sublimate in strong doses; Sattler insisted upon the efficiency of scarifications combined with scraping of the granular tissues; while Manolescu suggested the use of the brush; but the value of the procedure depends upon the employment together of all these procedures, which individually are inefficacious, and upon the complete exposure of the superior cul-de-sac.

LOCAL AND GENERAL ANÆSTHESIA.

Grandclément (*Lyon Médical*, Nov. 12, 1891) states that local anæsthesia usually suffices for the performance of minor operations, such as the relief of ingrowing nails, opening of abscesses, enucleation of small, superficial tumors, or to overcome the circumscribed pain of inflammation or of neuralgia. Several methods have been proposed for the purpose, but all are not equally valuable or secure.

1. *Anæsthesia by congelation with the aid of a refrigerant mixture of salt and ice* was the only method used twenty-five or thirty years ago; to-day it is almost abandoned. It is painful and time-consuming, and is best applicable to the extremities, the toes or fingers, which can be plunged into the mixture. Besides, ice cannot always and everywhere be obtained.

2. *Spraying with ether* originated with Richardson twenty-five years ago. It is superior to freezing with ice; it requires a special apparatus and protracted application, and is sometimes quite painful.

3. *Spraying with ethyl chloride* has recently been recommended. Ten grammes of ethyl chloride contained in a small glass bulb, terminating in a capillary tube that has been sealed in the flame of a lamp, are vaporized by the heat of the hand (ethyl chloride vaporizes at +10° C. (50° F.). A fine spray escapes when the tube is broken. In a short time the area sprayed presents a white appearance and a degree of anæsthesia sufficient to open deep abscesses and to perform other minor operations.

4. *Hypodermatic injections of cocaine* induce phenomena of profound intoxication in certain individuals, even when small doses are employed. Unpleasant symptoms sometimes follow the instillation of cocaine into the conjunctival sac. In the violent periorbital neuralgias that are provoked by certain affections of the eye, Grandclément has obtained good results from injections of cocaine and antipyrine in association. He believes that the œdema and vascular stasis resulting from the injection prevent too rapid absorption of the cocaine. The same end is attained by applying an Esmarch bandage to the part before the injection of cocaine is made. Grandclément has observed that the anæsthesia produced by the mixture of cocaine and antipyrine persists for several days.

THE NATURE AND TREATMENT OF STAMMERING.

Emil Behnke (*Jour. Laryngology and Rhinology*, July, 1891) has recently declared that the terms stammer and stutter should indicate the same condition, rejecting a former distinction that stammer should refer to that form of obstruction in which there is inability to pronounce vowels, and stutter to that form of impediment in which the consonants are at fault. The causes of these disturbances are attributable to the nervous centres controlling the mechanism of respiration, phonation and articulation.

Children afflicted with stammering do not, as a rule, outgow the habit; ridicule or severity will increase the difficulty.

Conditions needing surgical or medical interference, such as spinal curvature, post-nasal adenoids, decayed teeth, intestinal worms and phimosis, may prevent cure of stammering until their removal.

Cases of stammerers are divided into two classes—those in which fault lies in management of respiratory apparatus, and those in which it does not. In the former the prognosis is more hopeful. To test patient, he is placed flat on his back upon a couch, and is drilled in methodized and graduated series of sounds and inspiration, produced by diaphragm and muscles of abdominal walls, the hand of the trainer upon the epigastrium accentuating these movements.

If, after such practice, the patient shows improvement, a favorable result may be expected from treatment. In those cases in which obstruction does not depend upon imperfect respiration, Behnke attributes much of trouble to "an involuntary exaggeration of all the stops and checks taking place in vocal apparatus from glottis to lips, and he must therefore be trained to make these closures as shortly and lightly as possible." Thus a short aspirate may be inserted after a consonant; as G-h-eorge, instead of George, or, as patient would say, G-g-g-eorge; and p-h-a, instead of pa.

Stammerers sing and whisper without difficulty, because in singing there is almost continued tone, and in whispering there is absence of tone. It is advised to dwell on vowels at expense of consonants—and if vowel difficult to sound, it should be preceded by a short inspiration. Another beneficial exercise is to speak slowly, with teeth overlapping and pressed tightly together.

Result of treatment influenced by severity of case, intelligence of patient, also existing morbid conditions, especially those due to chorea or other nervous disturbances.

SOME OBSERVATIONS ON THE USE OF PIPERAZINE.

Dr. Heubach, assistant in the Clinic of Prof. Zuelzer, in the Johanneum, Berlin, says, (*Internat. Centralblatt für die Physiologie u. Pathologie der Harn. u. Sexualorgane*) for several months back have been making trials with piperazine in their clinic and polyclinic. This base, which is readily soluble in water and strongly alkaline in solution, has the chemical formula $C_4H_{10}N_2$, and in constitution is a piperidin in which the CH_2 group has been replaced by the NH. It is now manufactured on a large scale (by the Chemische Fabrika. A., vorm. Shering, of Berlin) and has been therapeutically employed in various quarters, notably by Ebstein and Sprague, Vogt, Bardet and others.

By these observers the remedy was preferably tried in cases of gout, and also on patients in whom it was necessary to dissolve uric acid concretions in the kidneys (gravel and urinary calculus). The application was suggested by the fact that piperazine experimentally dissolved large quantities of uric acid in test tubes at 20° C. (68° F.); that the urate combination of piperazine, furthermore, was at least seven times more readily soluble than the hitherto therapeutically preëminent car-

bonate of lithium, and finally that the base, even in the presence of excess of uric acid, produced no acid but an easily soluble neutral salt.

Ebstein and Sprague furnish a table of results, produced on a patient with uric acid diathesis by seven days treatment, with increasing dosage of 1 to 3 gm. piperazine. This table gives the impression that the volume of urine was increased thereby; in one case the exhibition of 2 gm. of piperazine increased the volume from 1250 to 2160, and in another instance even to 2270 ccm. in 24 hours, while the sp. gr. was similarly reduced. In addition the acid reaction of the urine was considerably reduced, and in one case became alkaline. The uric acid, which, according to Vogt, is reduced in proportion with urea, does not show this action.

In collaboration with Dr. Kuh, he undertook a series of experiments, both of them taking at the same time, without change of regular diet, 2.5 gm. piperazine one day, 1 gm. the second, and 2 gm. the third day, dissolved in a glass of seltzer-water. Within two hours after taking the piperazine it could be found in the urine.

The urine was tested in separate portions, three taken during the day and during the night.

After administration of the largest dose, 2.5 gm., an inconsiderable increase of urine volume was noted in both persons —in one to 2260, and the other 1970, ccm. in 24 hours. The reaction always remained acid, and the specific gravity was not heightened. One gramme doses lowered the volume to a normal amount, 1630 and 1500 ccm., always acid.

The quantity of urine was not increased; the sp. gr. also continued within normal limits. The reaction of the urine, estimated alkalimetrically, was always acid, and approximately amounted to the normal, 2.29 with one, and with the other 1.75 g. HCl.

To determine the effect on metabolism they selected N. (nitrogen) and P_2O_5 (phosphoric acid). The nitrogen (resp. urea) showed no increase—resp. 11 and 10.8 in 24 hours; nor did the phosphoric acid, which amounted to 2.4 and 2.3 g. Consequently the relative amount of the latter continued normal, viz., 22.4 and 21.6.

Corresponding with this showing, the use of piperazine induced no disturbance in their general condition; but it must be noted that after taking the largest dose (2.5 gm.) both persons experienced very severe headache on the following morning, and in one vomiting occurred. The smaller doses of 1 gramme were taken regularly for several days consecutively without causing any derangement.

As regards the uric acid, a very small increase (0.78 and 0.49 g. in 24 hours) was shown in all cases.

A trial was made to see if urine containing piperazine would dissolve uric acid; the result, even at high temperature and with extended action, was decidedly negative.

The therapeutic trials which they then undertook yielded distinct success in two cases of lumbago; both were treated by subcutaneous injections of a 2 per cent. solution. Patients received 0.5 gm. doses four times daily, a total of 2.0 gm. in 24 hours. Improvement in conditions was noted on the third and fifth days, and on the ninth and tenth days both patients were free from pain. The injections, they state, were in themselves quite painful, but they did not cause abscesses, nor were they followed by unpleasant after-effects. For subsequent use of the remedy they prefer to use voluminously diluted solutions.

Piperazine deserves particular attention in uric acid concretions in the kidneys. They had opportunity to study two such cases in detail, and they proved remarkable, because of the exceedingly favorable results.

These two cases, in connection with the cases reported by Bardet, speak distinctly in favor of a specific effect of piperazine, and show the advantage and desirability of further therapeutic observation in this direction.

ACTION AND USES OF FILICIC ACID.

The isolation of the active principle of male fern has acquired toxicological interest of late, on account of the occurrence of several fatal cases of poisoning attending the therapeutic employment of the extract. The toxic properties of filicic acid are still disputed. It is uncertain whether filicic acid possesses toxic properties. Much, however, depends upon whether we employ the pure crystalline product or the crude precipitated acid. Herr Poulsson shows that these two modifications differ in their physiological and chemical relations; that there is but little doubt that the inactive crystalline body is an anhydride or lac-

tone of the amorphous filicic acid, and is better termed filicin. Filicic acid is well adapted for therapeutic purposes, as it is easily dissolved, held in solution in the intestines, and is only very slowly absorbed; thereby explaining how it effects the expulsion of parasites. These results explain why a freshly-made extract of male fern is more active than in older preparations.—*The Pharm. Journ. and Trans.*, p. 85, August 1, 1891.

HYPNOTISM.

In a paper read before the Colorado State Medical Society, Eskridge (*New York Medical Journal*, August 1, 1891) stated that hypnotism is real and subjective and not dependent upon any mysterious influence of the hypnotist over the subject. The therapeutic value of hypnotism is governed by the mental impressions made during hypnosis, a state of increased impressionability. Much that is accomplished by hypnotism may be accomplished by repeated impressions without hypnosis. Hypnotism carries with it certain dangers to the hypnotist, to the subject and to the community, to be obviated by proper precautions. It remains to be determined whether or not the therapeutic value of hypnotism is greater than the unavoidable dangers of its application. The practice of hypnotism should be under state control and restricted to physicians and other scientific investigators.

MEDICINE.

ACTION OF UREA ON THE VASCULAR WALLS.

Dr. Munk, several years ago, on perfusing blood to which urea was added through a surviving kidney, found that the addition of urea accelerated the blood stream, and increased the secretion from the kidneys. This result was also produced by sodic chloride, the sulphates and phosphates of the alkalies, creatin, sugar, creatinin and other substances. The vaso-dilator action of the urea on the kidneys was not due to the action of the urea on the central nervous system, for it occurred in the excised and still living kidney. Cavazzani and Rebustello have made somewhat similar experiments by perfusing blood mixed with urea through several organs, but in all cases the organs or parts were left *in situ*. The fluid perfused was 1 part of bullock's blood mixed with 2 parts of normal saline solution (0.75 per cent. common salt). The animals employed were dogs, cats and rabbits. The quantity of urea added to the blood varied from 0.5 per cent. to eight per cent. as a maximum. Urea possesses a marked vaso-dilator action not only on the blood vessels of the kidney, bnt also on the vessels of the brain, liver and musculo-cutaneous vessels in the last case, as shown by its action on the blood vessels of the hind limbs. Speaking generally, the vaso-dilator action of urea is directly proportional to the quantity per cent. of urea present in the blood. The minimum percentage of urea required to cause vaso-dilatation is for the kidneys 0.5 per cent. and for the other organs mentioned one per cent. In opposition to Munk, the authors have never observed a secretion of true urine during their experiments.—*British Medical Journal.*

DISORDERS CAUSED BY TRICOCEPHALUS DISPAR.

Dr. Moosbrugger (*Jahr. f. Kindhlkde*, xxxiii, p. 137, from *Württemberg med. Correspondzbl.*) questions the usually accepted statement that tricocephalus dispar does not cause symptoms. He has found four recorded cases in which serious nervous symptoms were attributed to it, and adds a fifth case, a boy, aged 1½ years, who for six months had had diarrhœa of gelatinous slimy stools (sometimes blood-stained), had suffered from spasmodic cramps of the arms and legs, and had deteriorated very much in general health. The presence of progressive anæmia suggested the possibility that the child might be the host of anchylostoma duodenale; an examination of the fæces, however, showed the presence of the eggs of tricocephalus dispar in such enormous numbers that Professor Leichtenstern calculated that the child was passing about 3,000,000 eggs with its stools every twenty-four hours; he further calculated that to yield this number of eggs there must have been from 1,000 to 2,000 female worms in the child's intestines. Treatment by santonin, calomel, male fern, dry clysters of garlic, tobacco, yellow iodide of mercury, and decoction of pomegranate, met with little success, only two worms (one male and one female) being expelled. However, during a severe attack of feverish bron-

chitis they were passed spontaneously in large numbers. Their injurious effect on the host is to be attributed in part to abstraction of blood and serum, and partly to reflex irritation. Infection is believed to take place usually by the ingestion of imperfectly cleansed vegetables, but in this case the child was in the habit of sucking and swallowing garden soil.—*Brit. Med. Jour.*

KERAUNO-NEUROSES.

Frankl-Hochwart (*Zeitschr. f. klin. Medicin*, Bd. xix, H. 5 u. 6, 1891) describes as kerauno-neurosis a condition that develops in persons who have been struck by lightning. The symptoms are those characteristic of the traumatic neuroses, and include palsies, tremor, derangement of common and of special sensation, limitation of the visual fields, ataxia and exaggerated reflexes.

SPASTIC INFANTILE SPINAL PARALYSIS.

Dr. Pierre Marie (*Gazzetta dégli Ospitali*, No. 57, 1891) thinks the prognosis not absolutely unfavorable; an amelioration may take place in three to ten years. A certain degree of rigidity will always persist. Regular and non-violent massage, using large, passive movements, warm baths and galvanizations of the medulla, are the most efficacious means known.

THE SPECIFIC GRAVITY OF THE BLOOD IN HEALTH AND IN DISEASE.

As a result of a series of fifty-four observations in conditions of great diversity, Siegl (*Wiener klin. Wochenschr.*, iv, 33, 1891) has arrived at the following conclusions:

1. The specific gravity of the blood is dependent upon the proportion of hæmoglobin and is independent of the number of blood-cells.

2. Diseases, acute as well as chronic, only affect the specific gravity of the blood when they have led to gradual prostration. Rapid loss of strength, on the contrary, appears to exert but little influence. In the course of diseases in which the blood is contaminated by the products of pathological tissue metamorphosis, or in which the blood is deficient in its normal chemical constituents, there is, in addition to an absolute change in the specific gravity, a disproportion between the specific gravity and the percentage of hæmoglobin. In hepatogenous jaundice, in diseases of the lungs or of the heart attended with cyanosis, in diseases attended with loss of bodily fluids, the specific gravity is (relatively to the percentage of hæmoglobin) raised. When the blood is deprived of albumen as a result of albuminuria, and probably of long-continued suppurative processes, the specific gravity is lowered. In renal disease the quantity of urine and the degree of albuminuria will in each case indicate how far hydræmia or hypalbuminosis is responsible for the abnormal specific gravity.

3. In cases of anæmia, in which there is no organic disease that exerts an influence upon the specific gravity of the blood, this constitutes an index of improvement or of progression as regards the anæmia.

THE INFLUENCE OF DISEASES UPON THE RESPIRATORY INTERCHANGE OF GASES.

To determine if disturbances involving the exchange of gases between the air and the blood, and if anomalies of tissue metamorphosis in conjunction with which the need of oxygen or the capability of the tissues to unite with oxygen may be altered, do in reality materially influence the respiratory interchange of gases, Kraus and Chvostek (*Wiener klin. Wochenschr.*, Bd. iv, 1891, p. 33) made forty observations in twelve persons with various forms of anæmia (pernicious and secondary anæmia and chlorosis), leukæmia, and the carcinomatous cachexia. Under ordinary conditions no aberration from the normal was observed in the gaseous interchange. The taking of nourishment invariably augmented the interchange, as happens also in healthy persons during digestion. In a small number of cases muscular activity increased the combustion of oxygen and the production of carbonic acid, but not in the same degree as in health; in the anæmic patients, the respiratory coefficient (which normally arises) was lowered.

To determine the activity of the bodily oxidation, benzole was administered to six patients with diabetes, anæmia, carcinoma of the stomach, and leukæmia, and the quantity of phenol excreted was measured. The proportion of phenol was found small in conditions of impaired

nutrition, but no special change was observed for any single affection.

In investigating the influence exerted upon the respiratory process by an increased volume of oxygen in the inspired air, an admixture of ten volumes of nitrogen and ninety volumes of oxygen was used. The subjective condition of healthy and ill persons was not materially influenced by the continuous breathing of such a mixture; nor did objective manifestations appear. During the first ten minutes of easy breathing a considerable increase in the comparative quantity of oxygen absorbed was noted; subsequently the absorption of oxygen fell to the normal or lower. That this primary increase took place in anæmic patients with a decided deficiency of hæmoglobin makes it evident that the excess of oxygen taken up combines with the tissues. For a short time at the beginning of the experiment the exhalation of carbonic acid was increased, though not in the same degree as the absorption of oxygen. These observations indicate that there is no more substantial basis for the employment of oxygen in disease than has hitherto existed. Clinically, inhalations of oxygen were inefficacious. The most important indication for such a measure would be the sudden occurrence of respiratory insufficiency.—*Amer. Jour. Med. Sci.*

EPILEPTIC AUTOMATISM.

In a recent number of the *Revue Médicale de la Suisse Romande*, Dr. Grandjean has related a case of very great interest. It is that of a man of thirty-four, who, with the exception of an attack of somnambulism at the age of eight—an attack in which he had walked into his father's bedroom and congratulated him on being elected king of Italy—had been previously healthy. Towards the end of January, 1890, he began to suffer from nightmare and depression, without apparent cause, but he had no headache or vomiting. This condition persisted for two weeks. Then, on Feb. 9th, after going to his office and working as usual, at nine o'clock in the morning he took his hat, set out on foot, and arrived at Payerne, a village fifty kilometres distant. He had no recollection of anything that happened from the time he left his office until he awoke, in the middle of the night, in an inn at Payerne. His boots, he found, were much worn, but his clothes were in good order. He presented none of the usual effects of having passed through an epileptic paroxysm, except that he had a violent headache. After this he remained as usual for seven months, except that he had occasional "absences." Thus, on one occasion, while writing, he was surprised to find that he had continued at his work for an hour without any recollection of having done so. The work was done perfectly, without a single mistake. At the end of the seven months he had another attack similar to the first, but lasting for two days, during which he had gone about to different places acting in a manner which did not strike any observer as strange or peculiar, but being all the time unconscious. Five months later he had a similar, even more elaborate, attack, which also lasted for two days, and was followed by headache more violent than usual. Dr. Grandjean comes to the conclusion that this is undoubtedly a case of epileptic automatism. He does so from the nature of the attacks, from the fact that the man also suffered from "absences" of longer or shorter duration, really attacks of *petit mal*, and because the latter became almost totally suppressed under treatment by the bromides. The case is an important one, and it should serve to impress the fact once more that some criminals who profess complete unconsciousness of the act or acts with which they are charged may really be the subjects of epileptic automatism. If this patient had committed some crime during one of those periods of unconsciousness, a defence to the effect that he was the subject of epilepsy would have been received with considerable doubt, especially as there was nothing in the nature of a severe fit to point to in the former history, but only those temporary "absences" without any obvious convulsion.—*Lancet.*

STERILIZATION OF BRUSHES.

These are boiled for five minutes in the soda solution and kept ready for use, floating in sublimate solution, 1 to 2,000 (sublimate and acetic acid equal parts), with the bristles down in a small, enamelled, water-tight box, devised by Von Bergmann. In the operating-room the solution is changed two or three times daily.—*Uni. Med. Mag.*

A CONTRIBUTION TO THE PATHOLOGICAL ANATOMY OF THE RETINA AND OPTIC NERVE IN DISEASES OF THE BRAIN AND ITS MEMBRANES.

In the laboratory of Prof. Iwanski, the author has examined the retina and optic nerve in purulent basilar meningitis, 7 cases; tuberculous meningitis, 4 cases; chronic meningitis, 12 cases; hæmorrhage of the brain, 7 cases; and arterio-sclerosis of the brain, 9 cases, and has determined the following facts, viz.:

1. All diseases of the brain and of its membranes in consequence of injuries inflicted upon them, induce pathological changes in the retina and optic nerve.

2. Acute inflammation of the meninges occasions œdema of the papilla and disturbances which are intimately associated with the chief causes of this latter and the retina. (Neuro-retinitis œdematosa.)

3. Chronic inflammations of the meninges produce the same condition in the retina.

4. Arterio-sclerosis of the cerebral vessels extends also to the papilla and the retina, and always induces peripheral œdema in the latter. The œdema is the result of chronic venous hyperæmia, which is occasioned by disturbances in the circulation of the blood.

5. When extravasation follows arterio-sclerosis, this phenomenon can usually be observed also in the vessels of the retina.

6. In consequence of the pressure, which the accumulated mass of exudation exerts upon the optic nerve entrance, choked disc (staungspapilla) very frequently results.—Falser, *Deutsch. Med. Zeit.*

SURGERY.

REMOVAL OF SARCOMA OF THE MESENTERY.

A case has been lately recorded by Professor Llobet, of Buenos Ayres (*Revue de Chirurgie*, August, 1891), in which he removed with complete success a sarcomatous tumor of the mesentery, and at the same time resected a portion of the small intestine almost 5 feet in length. The patient, a man aged 23, whilst under treatment for urethral stricture, was found, quite by accident, to be affected with a very movable hard tumor of about the size of the kidney, which was situated within the abdominal cavity in the middle line, and about two inches below the umbilicus. The existence of this growth had not been previously suspected by the patient, who asserted that he had not at any time suffered from symptoms of disturbed digestion, or from pain in the abdomen. The growth was free from tenderness, save on forcible compression. In his endeavor to diagnose the nature of this morbid condition, the author was lead to reject the idea of a floating kidney by reason of the absence of urinary troubles, and of the free lateral mobility of the growth, and, guided by the facts of the situation of the swelling in the middle line, and of the absence of pain and of both general and local disturbance, he was disposed to regard it as a tumor of the mesentery. At the end of 1890 laparotomy was performed for the removal of the growth. A globular tumor was exposed involving both layers of the mesentery, and covered in front by a long loop of small intestine. The portion of mesentery between the tumor and the intestine was traversed by numerous large blood vessels. It was thought to be necessary to remove with the tumor the portion of small intestine adhering to its anterior surface. Its retention in the abdominal cavity after dissection from the tumor would, it is held, have exposed the patient to the almost certain danger of relapse and of wide and general diffusion of the disease, and, moreover, the retained portion of intestine would very probably have become gangrenous as a result of removal of the corresponding portion of mesentery, and of arrest of the vascular supply. After a thick ligature of catgut had been applied to the portion of mesentery attached to the tumor, the fixed portion of intestine, the length of which measured one metre and a half, was resected, and the two open ends of the divided intestine were brought together by sutures arranged in two layers, one set being carried through the mucous coat, and the other set through the muscular and serous coats. The tumor was then excised by means of curved scissors, the bleeding being arrested by the application of the thermocautery. The operation, which was performed with strict attention to all antiseptic precautions, lasted two hours and a half. The patient, who was able to get up and sit in a chair on the fifteenth day from the date of the operation, made a good recovery. The resected

portion of intestine which had been taken from the distal part of the ileum contained a round worm. No description is given in this paper of the minute structure of the growth. Professor Llobet draws from the facts of the case the following conclusions: (1) Whenever a diagnosis has been made of sarcoma or fibro-sarcoma of the mesentery, the surgeon, unless the growth has attained very great dimensions, should resort to extirpation; (2) the operation should be performed as soon as possible, and before the tumor has become very large; it is then less serious, and there is less probability of subsequent generalization of the disease and of its local recurrence; (3) in cases in which the diagnosis is doubtful, the surgeon should perform an exploratory laparotomy; (4) if the intestine be found adherent, even over a considerable extent, there should be no hesitation in performing enterectomy; (5) resection of a considerable length of small intestine is attended with the less risk the further the resected portion of intestine is away from the stomach.—*Brit. Med. Jour.*

RADICAL CURE FOR OZÆNA.

Dr. Michel Christovitch, of Salonique, says that ozæna is considered as an incurable disease, simply because its treatment was exclusively symptomatic, struggling against the stagnation and fetidness of matters by means of irrigations, of antiseptic pulverizations, etc., . . . the disease being considered as originating from a strumous or specific constitutional general state.

It was only three years ago that the French Society of Laryngology, in Paris, discussed at length the nature of ozæna, and came to the conclusion that it is merely local and of a microbian origin.

Hajet has found, in the secretions of ozæna, a coccus very similiar to the capsulated coccus of Friedlander. That bacillus decomposes organic matters; then fatty acids are developed, producing the fetidness characteristic of ozæna. The microbe resides in the glands of the nasal mucous membrane, which are media propitious for the culture of that microorganism.

Ozæna, therefore, may be cured when the glands of the nasal mucous membrane disappear, either by the effects of the disease itself, or through an operation.

Ozæna is only the characteristic symptom of the disease called chronic atrophic rhinitis.

That atrophic rhinitis will develop better with a person of a weak or strumous constitution, but well constituted individuals are not exempt.

Basing myself on the anatomo-pathological lesions, I find that the most rational treatment is by destroying the focuses of microbes—that is, the degenerated mucous glands—and, according to the more or less advanced state of the affection the surgical treatment shall be more or less energetic. At the start of the affection we should limit ourselves to the cauterization of the deep and superior parts of the nostrils with the galvano-cautery, and repeat it according to circumstances. When the lesions of the atrophic rhinitis are already advanced, it is absolutely necessary to practice the real operation in destroying, by removal, all the degenerated mucous glands covering the *nares internæ* up to the naso-pharyngeal region. Then, in order to complete the operation, we cauterize with the galvano-cautery.

Process of Operating.—On the day preceding the operation we make abundant alkaline and antiseptic irrigations of the nostrils, which means are insufficient for a complete antisepsy and for removing the concrete matters, which are very adhesive, especially toward the superior anfractuosities. We render the field of operation less sensitive, by means of pads of hydrophile cotton dipped in a concentrated solution of cocaine, which are introduded high enough and deeply.

After ten minutes, we withdraw the pads, and we proceed with the operation. With a scraper elongated and of small dimension, so that it may be easily introduced, even into the small anfractuosities, we scrape and empty effectually and rapidly all the degenerated nasal mucous membrane covered with concrete masses, even to the naso-pharyngeal region, and we continue scraping in this way until the fetidness has completely disappeared. After the scraping we immediately make the cauterization of the profound parts that have escaped scraping. The hæmorrhage, that is considerable, stops rapidly by the introduction, into the nostrils, of the pads of hydrophile cotton in a large quantity.

One single operation well made suffices, in most cases, for the complete cure.

That operation presents no inconvenience, except some pains in the ears.

In one case, the consecutive treatment consisted simply in snuffing powder of iodoform mingled with powder of boric acid.

In conclusion, the efficacious treatment should be local and, in the second place, general. Ozæna should be treated early, not only in order to stop the progress of the affection, but also in order to prevent the very grievous consequences resulting from the continual inspiration of the nasal putrid matters.

THE SEAT OF PUNCTURE IN PARACENTESIS ABDOMINIS.

Trzebicky (*Archiv. für klin. Chir.*, xli., 4), in performing paracentesis abdominis at the point of election—that is, midway between the umbilicus and the anterior superior spine of the ilium—wounded a large blood-vessel which gave such troublesome bleeding that the life of the patient was threatened. The hæmorrhage was arrested by compression of the common iliac artery. Incited by this experience, and by several reports of fatal bleeding following puncture at this point, Trzebicky conducted an experimental research upon a large number of cadavers. As a result of this he announces the following conclusions :

In the majority of cases paracentesis performed at a point midway between the umbilicus and the anterior superior spinous process of the ilium is perfectly safe, since neither the epigastric artery nor any large branch of this vessel is liable to be wounded. The artery commonly crosses this line at the junction of the inner with the middle third.

In a certain proportion of cases, however, the epigastric artery or one of its branches lies directly beneath the point of election.

The course of the epigastric artery is seldom exactly similar in the two sides of the body.

Since the artery runs within the sheath of the rectus muscle, its course depends mainly upon the position of this muscle. In case the two recti are separated by abdominal distention, the artery is displaced, so that it lies very near the point of election for puncture. The rectus muscle does not, however, bear a constant relation to the artery. At times, even though the muscle is displaced to the side, the artery lies near the middle line.

Variations in the origin of the epigastric artery seem to have no influence on the course of the former vessel.

The artery is usually accompanied by a single vein.

Paracentesis abdominis should be performed either in the linea alba or in the outer half of the line joining the umbilicus and anterior superior iliac spine. In case the linea alba is selected, it is not important to keep strictly in the middle line, since there is an arterial branch which may be wounded if the trocar is entered, even slightly, to one side.—*Am. Jour. of the Medical Science.*

OBSTETRICS.

THE TREATMENT OF ALBUMINURIA AND NEPHRITIS IN PREGNANCY.

Mijulieff (*Geneesk. Cour.*, 1891, No. 18) has derived the following indications for treatment from three cases of nephritis in pregnancy in which the fœtus perished in the uterus : when a woman previously healthy shows symptoms of nephritis during the first months of pregnancy, abortion should be induced ; in the second half of pregnancy, it is rarely necessary to interrupt pregnancy, except for urgent symptoms. In chronic nephritis during pregnancy, labor should be induced in the interest of mother and child as soon as viability is possible.

OPIUM ENEMATA IN THREATENED ABORTION.

In the *Gazeta Lakarsks*, No. 33, 1891, p. 657, Mr. Feliks Arnstein, of Kutno, Russian Poland, maintains that in case of threatened abortion the practitioner is justified in accelerating and terminating the process only when the interruption of gestation is induced by death of the fœtus. "In all these cases" he says, "be the uterine pains of short or long standing, weak or strong ; be flooding absent or present, scanty or profuse ; be the cervix softened or not, and the os closed or widely gaping—in all alike treatment must consist in adopting all possible measures for retaining the ovum in the womb and arresting its threatened expulsion therefrom." As far as the writer's personal experience goes, the best way to accomplish this is the persevering administration of opium *per rectum*. As much as 15 drops of simple tincture of opium, *Ph. Ross.* (containing 1 in 10 of the drug) with 2 tablespoonfuls of lukewarm water should be injected into

the bowel every hour, the patient lying quietly in bed and taking occasionally some acid drink. Leaving out of consideration cases in which complete detachment of the ovum has already taken place, the treatment is said to be followed by the best possible results: "the uterine pains steadily and fairly quickly become less intense and less frequent, and ultimately cease altogether; hemorrhage becomes less and disappears; in some (occasionally twenty) hours the os is found to have contracted and the ovum to have receded." The author relates a case in which a fairly advanced abortion was controlled by the injection of 45 drops of the opium tincture. In some cases, however, the total quantity required for the purpose may amount to 80 or over 100 drops. Pregnant women are thought to tolerate opium much better than other persons, the toxic effects being usually limited to a heavy feeling about the head, and drowsiness, which disappear in a day or so.—*British Med. Journal.*

OBSTETRICAL PARALYSES IN THE NEWBORN.

Dr. Danchez (*Annales de Gynéc. et d'Obstét.*, October, 1891) concludes a series of observations upon injuries to the child during labor, and their more or less permanent effects. A number of instructive cases have beed collected and published in abstract in Dr. Danchez's memoir. In several, pressure on Erb's point (where the fifth or sixth cervical nerves emerge) caused more or less paralysis of the deltoid, brachialis anticus, biceps, and supinator longus. This pressure is made by the obstetrician's fingers during version, and traction on the shoulders during extraction in breech cases, and in normal presentations where the second stage is lingering. Sometimes the serratus magnus is paralysed. The forceps may do as much harm as the fingers. A bad case of dislocation of the shoulders and paralysis, under Dr. Monnier's care, is published for the first time by Dr. Danchez. A country midwife undertook a breech case. In order to hasten delivery she dragged the child's body forcibly by the feet. The arms were thus pulled over the head. Next day it was noticed that the child's arms were abducted and rotated inwards. When the child was seen four years later by Dr. Monnier the arms remained in that position. When it was eleven days old a physician at Quimperlé diagnosed dislocation of both shoulders, but did not, apparently, attempt to reduce them. Electricity was tried for six months by another practitioner. When examined by Dr. Monnier the dislocations were evident. All the muscles of the shoulder were atrophied; the teres minor and infraspinatus formed a firm cord. The child could hardly use his hands. He was a male in good general health. Sensibility was intact all over the damaged upper extremities. Dr. Danchez distinguished two classes of congenital obstetrical paralyses. The first class includes the so-called spontaneous paralyses, when the lesion is entirely due to the natural or abnormal mechanism of labor, and not to the obstetrician or his instruments. The head or one of the limbs is pressed against the surrounding parts to the damage of certain nerves. The second variety bears the term "traumatic paralysis," where during traction, version, or the use of the forceps, some damage is done to a nerve or to a plexus of nerves. Over and above these two classes Dr. Danchez adds a third, which he terms "obstetrical pesudo-paralysis," where the paralysis is simulated by primary or secondary dislocation of one or both upper extremities, as in Dr. Monnier's case. Obstetrical paralyses are almost entirely motor. Nevertheless, two cases are recorded where sensory paralysis followed difficult version; the serratus magnus and many muscles in the arm were, in both instances, paralyzed.—*British Med. Journal.*

PILOCARPINE IN PUERPERAL ECLAMPSIA.

In the *Gazette hebdomadaire des sciences médicales* for September 12, Dr. Strisover adds to the experience of observers in this field the results of his use of pilocarpine in the treatment of eclampsia. By the subcutaneous injection of hydrochloride of pilocarpine the author has been successful in controlling the convulsions and preventing their recurrence in ten cases. The treating successively of such a number of cases without one death has led the author to the conclusion that pilocarpine is an antagonist to the eclamptic process; that feebleness of the pulse is not a contra-indication to the repeated injection of the drug, so long

as the convulsions reappear; and, finally, that the condition of the pupils is to be relied upon as an index to the further accession of the convulsions or to immunity by the physiological action of the drug.

GYNÆCOLOGY.

HYDATIDS IN THE PELVIS SIMULATING OVARIAN TUMOR.

Dr. Olenin (*Nouvelles Arch. d'Obstét. et de Gynéc.*, Supplement, September, 1891, p. 426) read before a Russian Medical Society a remarkable case of erroneous diagnosis. A multipara, aged 43, had a swelling with pain in the hypogastrium for two years. Abdominal section was performed and no ovarian tumor could be found, but innumerable hydatid cysts were disseminated in the usual manner over the omentum, and also in the substance of the liver. The largest of all the hydatids, a cyst as big as a child's head, was situated in the pelvis. The patient died of peritonitis on the day after operation.—*Brit. Med. Jour.*

THE DIAGNOSIS OF CHANCRES OF THE CERVIX.

According to Rasumow (*Moskau*, 1890) in the primary affection of the cervix appears in two varieties—as erosive and ulcerative, and deep chancres having sharply defined borders. The author claims that the diagnosis of primary syphilitic affection of the portio vaginalis is not as difficult as is claimed by most gynæcologists. It is made evident by the presence of indolent, hard, and immovable glands in the inguinal region. Soft ulcers of the cervix may often be overlooked, being painless and manifesting no symptoms. Rarely an inguinal bubo develops in connection with a soft chancre of the portio vaginalis.

DANGER OF CAUTERIZATION OF THE CERVIX AND UTERUS.

Dr. R. Pichevin (*Nouv. Arch. d'Obstét. et de Gynéc.*, February to August, 1891) has published a valuable series of cases, collected from numerous sources, which show the danger of lavish and careless use of caustics—a danger common to all the resources of "minor gynæcology" when employed in an unintelligent manner. Dr. Pichevin refers chiefly to mineral caustics, such as chloride of zinc in sticks, *pâte de Canquoin*, and nitrate of silver. The latter is by no means harmless. Dr. Walton describes three cases where complete atresia of the cervix with amenorrhœa followed the application of sticks of nitrate of silver to the interior of the uterus. Forcible dilatation of the cervix was found necessary. In other cases disease of the appendages followed frequent cauterization. — *Brit. Med. Jour.*

TOTAL EXTIRPATION OF THE UTERUS.

Kattenbach has totally removed the uterus 57 times—53 times for carcinoma, twice for sarcoma, twice for prolapsus. He finds that total extirpation is always indicated when the *technique* of the operation can be easily executed. He even hopes to attain a complete cure. Theoretically, partial extirpation may be excellent and sufficient, but practically, it is very rarely indicated. For example, he partially removed the uterus of a woman seven months pregnant, upon the anterior lip of which he found a carcinomatous growth as large as a walnut. He removed it by a triangular incision, and the pregnancy continued its normal course. Generally speaking, he is of the opinion that whenever it is necessary to extend the operation beyond the vaginal insertion entire removal of the organ is to be preferred, as there is much greater danger of relapse in cases of partial resection. Of the 57 cases of total extirpation only 2 died. One of these deaths was caused by uræmia from ligature of the left ureter, and also, perhaps, by an injury to the bladder. One of the dangers of the operation is the possible wounding of the ureters or the bladder. In two cases he was afterwards obliged to perform colpocleisis, on account of vesico-vaginal fistula. Three of the women in question were over 60 years of age, and grave pulmonary affections afterwards supervened; but they had previously suffered from bronchitis, emphysema and cardiac weakness. He attaches great importance to the suture of the peritoneum and to means of disinfection, and prefers solutions of boric and salicylic acid. As to the danger of relapse, a year had passed away without the reappearance of the disease, in 25 of the cases of carcinoma, and a still longer period in 7 others. All the patients recovered

promptly after the operation. In case of relapse, subsequent treatment is by the use of Paquelin's cautery and chloride of zinc. He never had abundant hæmorrhage. One patient was cured of a carcinomatous fistula of the bladder by the operation. As a whole the results of his work encourage total extirpation of the uterus, especially when it can be performed at a favorable moment.—*Journal de Médecine de Paris*, Sept. 20, 1891.

LAPAROTOMY IN PERITONITIS.

Dr. Krecke, of Munich, has collected from various sources the results of laparotomy in diffuse purulent peritonitis, and points out that the operation has been the means of saving many lives; for, although the statistics of peritonitis treated medically show a mortality considerably below that given by laparotomy, it is clear, as he says, that a large majority of the successful cases in the first category are such as would never be submitted to surgical treatment, many of them being referable to inflammatory lesions of the female pelvic organs, and not of an infective kind. Surgical intervention is, on the other hand, called for in case of general infective peritonitis, such as arises from perforation or in the puerperal period, or from extension of suppuration from other parts. Dr. Krecke points out the difficulties of securing effective drainage, and is averse to irrigation, owing to the possibility of its disseminating septic material to parts of the membrane not previously infected, or of exciting hemorrhage. He prefers rather a simple incision, drainage, and the use of iodoform gauze. Peritonitis is fatal from septicæmia, due to the absorption of poison from the cavity; but it is remarkable how tolerant the membrane may be of such virus. If the limit of this tolerance could be gauged, some guidance might be obtained as to the appropriateness of surgical interference in any case. But the fact is that there are various degrees and forms of acute peritonitis, some being fatal from sceptic absorption within a few hours of the onset, before even any noticeable change takes place in the membrane itself. Early operation is then called for, and consideration must also be had to the source of the inflammation. Dr. Krecke's statistics are interesting and instructive. He has collected 119 cases of laparotomy in general peritonitis, the origin of which was determined in all but 18, of which 9 were successfully treated by laparotomy and 9 died. The majority of the remaining 101 cases belonged to the category of perforation peritonitis. Of these, 36 were cases of general peritonitis following perforation of the vermiform appendix; 12 were cases of typhoid perforation (a condition which at first sight it might seem hopeless to deal with), and these yielded 5 successes; 12 were due to perforation from gangrene and other causes implicating the bowels —of the gangrenous not one recovered, and of the 8 others only 3 were cured by the operation. No case of perforating ulcer of the stomach has yet been saved by laparotomy—a result precisely the same as that yielded by medical treatment. Of traumatic cases, 3 of punctured wounds and 1 of gunshot were recovered; but of contusions, only 3 out of 8 cases recovered from laparotomy. The measure, however, saved 5 out of 13 cases of puerperal peritonitis. Lastly, a group of cases of peritonitis from various other causes gave 3 deaths and 6 recoveries. The total result is 119 cases of general peritonitis treated by laparotomy, 51 recoveries, and 68 deaths—statistics which are certainly encouraging.—*Lancet.*

HYGIENE.

SOME COMMON ERRORS IN THE FEEDING OF YOUNG CHILDREN.

In a recent lecture reported in the *Practitioner* for July, Dr. Cheadle draws attention to certain points in the feeding of infants in regard to which faulty and injurious practices prevail. One of the most frequent sources of disaster is the sudden weaning with the use of fresh cows' milk and water. The massive curds formed from cows' milk are frequently beyond the feeble digestive powers of the infant. Dilution will partially remedy the matter, but cannot, as a rule, be carried to a sufficient extent without unduly increasing the bulk of the food. The clots, by decomposing, cause colic, vomiting and diarrhœa. Boiled milk not only is to a certain degree sterilized, but clots less firmly than raw milk. Children should be weaned on boiled milk and barley water. In the case of very young or delicate children, however, the milk should always be peptonized at first, a proper degree of dilution being observed at the same time.

There is danger here of another grave error—the prolonged use of artificially-digested foods. While these preparations do excellent service in the case of children just weaned or with small digestive power, they are not proper for continued use. The power of digesting casein becomes gradually less, nutrition is impaired, and the child tends to become flabby, anæmic and soft in bone. Still another error consists in the furnishing of an insufficient gross amount of nutritive material. A child may be unable to digest a mixture of milk unless highly diluted, but the capacity of the stomach being limited, it may be impossible for it to take a sufficient quantity of such a mixture to supply the material required for growth and nutrition. The difficulty may be overcome by the addition of cream or some good preparation of meat juice, the quantity of milk being increased as the digestive power develops. Food deficient in fat, as well as that deficient in protein, is certain to cause trouble. Fat especially is of great importance in the food of young children. Those deprived of these two elements are often large and fat, but flabby, anæmic and rachitic; yet most of the artificial foods upon which children are so largely fed are almost wholly lacking in fat and to a less degree in proteids. The presence of an antiscorbutic element in the food is also a matter of prime importance. Fresh milk contains the element in sufficient quantity, but all farinaceous foods, and all the dry artificial foods, are decidedly deficient in this regard. They require the addition of some fresh element to supply the antiscorbutic quality.—*N. Y. Med. Jour.*

VEGETABLE BUTTER.

F. Jean states that an alimentary fat has been manufactured at Mannheim from the oils of the kernel of the cocoanut (*Cocos nucifera*). A hectare of cocoa palms, representing 225 trees, yields yearly 800 kg. of oil. Hitherto the use of these oils has been hindered by their acrid flavor; but by treatment with alcohol and animal charcoal the rancid flavor is removed and the product is rendered white. This is the only fat which is analagous to the cow's butter, as it contains the same proportion of soluble fats. It has the advantage of containing no pathogenic germs.

HOW TO JUDGE THE QUALITY OF CONDENSED MILK.

The general appearance when poured from a spoon should be glossy; the more glossy the better. It should be ropy or stringy like very heavy syrup.

The color should be that of cream, but the color varies according to the season of the year in which the milk is condensed, the same as milk not condensed varies in color. Milk is more yellow in summer, when cows are on pasture, than in winter, when they are fed on dry hay.

Thickness varies with age. Thickening by age is natural to condensed milk; rapid thickening only proves that the milk is preserved in the best manner, and that it retains in the highest degree the characteristics of milk in its natural state. Condensed milk which does not thicken by age, or which thickens very slowly, is milk abused in the process of condensing. Consumers make a great mistake in supposing that the thinnest condensed milk is the best. The thinnest condensed milk contains the most water, and, of course, less of milk solids or nutritives. The thickest condensed milk, if in sound condition, is the most valuable. There is a degree of thickness, however, that is inconvenient. If condensed milk is so thick that it will not run out when an open can is inverted, it is troublesome to dissolve. If it is not actually hard, very little stirring in the can will render it sufficiently liquid for convenient use.

Condensed milk, if properly done, does not destroy cream globules, but leaves the constituents of milk unaltered and natural. One method, therefore, of determining the relative quality of different samples of condensed milk is to ascertain the amount of butter that can be made from each.—*Scientific American.*

ALCOHOL AND THE NERVOUS SYSTEM.

In the inaugural dissertation of Dr. Spaink, of Baarn, of which a short abstract appears in the *Neurologisches Centralblatt*, an account is given of the results of certain experiments carried out with the view of testing the effect of alcohol on the peripheral nervous mechanism of rabbits. Clinically, it was found that the animals lost weight, became dull and weak, had tremor of tongue and shaking all over, and finally lapsed into a condition closely resembling delirium tremens. In the peripheral nerves examined there

was found to be the usual degeneration of the medullary sheath, but there was also present a curious corkscrew or even knotted appearance of the axis cylinders, which does not seem to have been previously described. The author regards the appearance as pathological, and not due to the methods of hardening or staining.—*Lancet.*

PÆDIATRICS.

NOCTURNAL ENURESIS IN MOUTH-BREATHERS.

Dr. Otto Koerner says that a very common cause of enuresis in children is the habit of mouth-breathing, and reports some cases in support of this view in the *Centralblatt für Klinische Medicin* for June 6, 1891. In every case of wetting of the bed by children, the physician, he says, ought to examine the little patient carefully to see whether there is any obstruction in the upper respiratory passages, and even if none be found the child should be observed when sleeping to see if it is not breathing through the mouth.

RAISING CHILDREN IN BRAN.

This method was proposed by M. Pue at the *Société Normande d'Hygiene Pratique*. It consists of a cradle which has the wooden bottom taken out, and is then lined with a strong cloth. In this is placed sterilized bran to nearly half a yard in depth. A hair pillow is used. The baby has only a short flannel shirt on and is naked from the navel downward. It is covered with a woolen blanket, and a wool-lined dress is kept to put it in when taken up for nursing. It has thus full liberty of movement in all its limbs, while its dejections pass at once into the pure bran, keeping the child dry and clean, even if there is diarrhœa. This method is a cheap one, the bran not costing as much as diapers.

INTUBATION IN CROUP.

Escherish (*Rev. Mens. des Mal. de l'Enf.*, April, 1891), after discussing the advantages and disadvantages of tracheotomy and intubation, and comparing the statistics of the two operations, arrives at the following conclusions:

1. Intubation cannot completely take the place of tracheotomy; in cases in which one can choose between the two, the interests of the patient will usually demand tracheotomy.

2. The value of intubation cannot be determined from statistics. Each case should be studied with reference to its own characteristics and the localization of the disease.

3. The advantages of intubation are the ease and rapidity with which it can be done, the ability to dispense with anæsthesia and skilled assistants, absence of an external wound, and short duration of treatment. The disadvantages are necrosis from compression of the laryngeal mucous membrane, frequent entrance of food into the respiratory passage, frequent and painful attacks of cough, difficult expectoration of membranes and secretions, and deficient pulmonary ventilation, as compared with tracheotomy.

4. Tracheotomy should be preferred to intubation when the diphtheritic process is rapidly extending to the bronchi or involves them from the beginning, when the patients are very young and the muscles of expiration only slightly developed, when the disease has a septic character or has followed some other debilitating disease.

5. Intubation is indicated in cases in which the process is limited to the pharynx and larynx and does not show any septic characteristics.

6. If at the end of five days it is still improper to remove a tube which has been introduced, if alimentation becomes difficult and there is a probability that the disease has extended to the bronchi, the tube should be removed and tracheotomy should be performed.

THE MORPHOLOGY OF BREAST MILK AND THE NUTRITION OF THE CHILD.

An extensive study by Ivanoff (*Thèse de Saint Petersburg*, 1890) of this subject led him to the following conclusions:

1. The cellules of colostrum are of epithelial origin.

2. The multiparæ colostrum changes to milk more rapidly than in primiparæ.

3. Puerperal diseases retard the disappearance of the colostrum corpuscles.

4. These corpuscles reappear in the milk after ten months of lactation, and when the infant is only partly fed from the breast.

5. The free hyaline corpuscles, as well as those which are enclosed in the fatty globules, form a constituent of normal milk at a certain period of secretion.

6. Good health, good nutrition, and youth in the mother, give a milk richest

in fatty globules of large size, as is also true of the cellules.

7. The last portion of milk taken at a feeding holds fewer globules, and these of smaller size than the first portions.

8. The estimation of the nutritive quality of milk should be based upon the number of fatty globules; and, secondarily, upon their size, the quantity of cellular element, and, finally, upon the quantity of granules.

9. Milk which contains a very large number of fatty globules (more than 3½ per cent.) is not well borne by very young infants.

10. Milk, the globules of which are large, is less nutritive and less well borne.

11. The maximum of daily increase of weight of the child is produced by milk which contains a mean quantity of fatty globules of medium size (27.7 grammes daily).

12. The milk which contains few fatty globules gives little increase of weight (16 grammes daily); and the same is true if the fatty globules are in too great quantity or are too large (19 grammes daily).

13. Women who are thin and young in general are the poorest nurses, often making the children dyspeptic and giving them a mean daily increase of weight of only 11.5 grammes.

14. The microscopic examination of a freshly secreted milk give a sure indication of its nutritive value.

MEDICAL CHEMISTRY.

REAGENT FOR ACETONE.

Prof. Alf. Schwicker communicates a new method of detecting acetone to the *Chemiker Zeitung* (No. 52).

He found that a mixture of acetone and aqueous ammonia dissolves powdered iodine with evolution of heat. The liquid becomes turbid, and after a time separates iodoform. At the same time there is produced an irritating odor, causing tears in the eyes, which is probably due to iodine substitution compounds of acetone. No gas is given off, and the liquid is found to contain acetic acid.

This reaction may be used to detect acetone, for even traces of the latter dissolved in water respond to it. Moreover, *alcohol* does *not* produce iodoform under the same circumstances.

The best way to execute the test is as follows:

To the solution containing or supposed to contain acetone add a few drops of strong ammonia, and then 1 or 2 drops of a decinormal iodine solution.

This will cause a blackish cloud of iodide of nitrogen, which disappears on shaking or gently warming, and soon makes place to a yellowish cloud of iodoform if the liquid was not too diluted. By adding 1 or 2 drops more of the iodine solution, the amount of iodoform may be increased. After every new addition of iodine, and disappearance of the black cloud by shaking, a few moments are allowed to elapse. On shaking, the odor of iodoform will be distinguishable in spite of the ammonia.

In the case of a very dilute solution of acetone a more dilute iodine solution must be used.

Should the black iodide of nitrogen not disappear, but remain, it may be decomposed by the cautious addition of hyposulphite of sodium.

Solutions of acetone of 1 in 5000 yield a precipitate of iodoform after a few minutes, or at least exhibit a decided odor of iodoform.

Alcohol, as already stated, does not respond to this reaction, but aldehyde does. In this case iodoform is also produced, but the acid generated as a secondary product must in this case be formic acid.

SCOPOLAMINE.

Prof. Ernst Schmidt has recently given, at a meeting of German Naturalists and Physicians, some further particulars of an alkaloid separated by him from the root of Scopola atropoides some eighteen months ago, and provisionally named, scopolamine. The hydrobromide occurs in beautiful glassy crystals, and from the results of analyses of this salt and the hydrochloride, hydriodide, sulphate, and a highly characteristic gold salt, as well as of the free base, the composition of scopolamine is represented by the formula $C_{17}H_{21}NO_4$. Scopolamine appears to contain a hydroxyl group, as it yields a monoacetyl derivative; towards nitrous acid it behaves as a tertiary base. By boiling with baryta water it is split up into atropic acid and a crystalline base, melting at 110° C., which has a composition represented by the formula $C_9H_3O_2$. Professor Schmidt announced that the "hyoscinum hydrobromicum" at present met with in commerce consists essentially

of scopolamine hydrobromide. Scopolamine is said to have also been obtained in small quantity from belladonna root and from stramonium seed. The mydriatic basic substance separated by the author from one sample of Duboisia myoporoides consisted essentially of scopolamine, but that obtained from a sample of the leaves from another source was essentially hyoscyamine.

CLIPPINGS AND NEWS ITEMS.

CLASS BANQUET.

The "class of '78" of Jefferson Medical College held its fourth annual banquet at the Hotel Bellevue, December 29, 1891. The invited guests were Professors Da Costa and W. H. Pancoast, the two living professors of the faculty of 1878, and Dr. T. H. Andrews, with Dr. L. Webster Fox, class president, in the chair.

Among those present were Drs. Daniel E. Hughes, A. H. Hulshizer, Dr. Frantz, J. Moore Campbell, T. E. Conard, M. John Cummings, Nevin B. Shade, Lambert Ott, Harry Braus, H. Howard Drake, J. A. Wamsley, Dr. Arney, H. Page Haugh, Fred. A. Oliver, F. H. Carrier and J. W. Sampsel.

The next banquet will be held in Philadelphia, November 10, 1892.

AMERICAN PHARMACEUTICAL ASSOCIATION.

Membership in the American Pharmaceutical Association is obtained only by election at the annual meeting. "Every pharmacist and druggist of good moral and professional standing, whether in business on his own account, retired from business, or employed by another, and those teachers of pharmacy, chemistry, and botany who may be specially interested in pharmacy and Materia Medica," are eligible for membership. For blank applications and further information address, Dr. H. M. Whelpley, 2729 Washington Avenue, St. Louis, Mo., Chairman of Committee on Membership.

DR. LUCIA REDDING THOMPSON.

Dr. Thompson, one of our recent French correspondents, has returned to this city and will open a Sanitorium.

THE SONG OF THE SADDLE-BAGS.

BY H. C. S.

Faded and rusty, mud-spattered and worn,
Rifled of contents, bottles broken and gone,
Covered with dust, I hang here and mourn
For the days of yore;
When the world bowed down to me,
As I sang this song exultingly:—
"Now and forever, the whole round world wags,
To the rhythmic song of the saddle-bags!"

In palace and cottage, at sea or ashore,
'Mid sunshine or storm, I continued to pour
Forth my treasures of healing frail man to restore
To comfort and health.
Requiring no thanks, accepting no fee,
Again and again I sang joyously:—
"Now and forever, the whole round world wags,
To the rhythmic song of the saddle-bags!"

Like Napoleon I sigh'd, "the world is small!"
I longed for new races—to conquer them all.
I laughed when 'twas whispered I might have a fall
From my high estate.
I grew pompous and proud and vain as could be,
And continued my song exultingly:—
"Now and forever, the whole round world wags;
To the rhythmic song of the saddle-bags!"

Oh, 'tis bitter, indeed, that my hopeless disgrace
Shou'd be caused by a changeable human race
In its boasted progression (for such they've the face
To proclaim it!)
Old, battered, helpless, I accept the decree,
E'en though I murmur impatiently:—
"Never again! the whole round world wags,
To a *later* song than the saddle-bags!"

There's a lesson of sorrow for you in my song;
A lesson for all who believe themselves strong.
Remember that pride and great strength belong
To youth, and like me
The subject of jeers you may live to be,
As you childishly moan in your misery—
"Never again! the whole round world wags,
To a *later* song than the saddle-bags!"

—Indiana *Med. Journal.*

MEDICAL LEGISLATION IN OHIO.

Pursuant to call issued by the Cincinnati College of Medicine and Surgery for a delegated convention of the medical colleges of the State of Ohio, which was held at Columbus, December 3d, representatives of the following faculties were present, viz.: Starling Medical College, Toledo Medical College, Pulte Medical College, Columbus Medical College, Medical Department of the National Normal University, College of Physicians and Surgeons of Columbus, Woman's Medical College of Cincinnati and the Cincinnati College of Medicine and Surgery.

On motion, Dr. Starling Loving was elected Chairman and Dr. Charles A. L. Reed, Secretary.

On motion of Dr. C. E. Walton, representatives of the Physio-Medical Society of Ohio were admitted to a vote in the convention.

Dr. Charles A. L. Reed presented the following:

Resolved, By the Medical Colleges of Ohio, in convention assembled, that the Legislature be and is hereby requested to enact a law which shall embody the following features, viz.:

1. The creation of a board or boards of medical examiners in the composition of which equitable and just representation shall be accorded to the various recognized denominations of medical practice.

2. The examination of all candidates for the practice of medicine holding diplomas hereafter issued by medical colleges which shall be deemed in good standing by the board.

3. Exemptions from examinations to extend only to those who at the time of the enactment of this law shall be recognized as legal practitioners within the meaning of existing statutes; but all legal practitioners shall be required to register.

4. A penal clause which shall secure the enforcement of the foregoing provisions.

Dr. C. E. Walton, on behalf of the Legislative Committee of Cincinnati, presented the registration law approved and promulgated by that committee.

On motion by Dr. Shockey, the resolutions presented by Dr. Reed were approved.

On motion by Dr. Kinsman, the secretary was directed to forward transcripts of these proceedings to each local medical society in Ohio, and to the medical press.

On motion by Dr. Scoville, a committee was appointed to confer with the Legislative Committee of Cincinnati for the purpose of securing such changes in the bill proposed by that committee as to make it conform to the resolutions adopted by this convention.

The chair appointed as such committee, Drs. S. S. Scoville, T. C. Hoover, G. W. Mayhew and Chas. A. L. Reed.

Adjourned.

CHARLES A. L. REED, Sec.

STARLING LOVING, Chairman.

MORBID CHANGES IN JOINTS IN SYRINGOMYELIA.

The *St. Petersburger Medizinische Wochenschrift* publishes a *résumé* of Dr. N. A. Sokoloff's little work on the Morbid Changes in Joints observed in Syringomyelia. These changes occur, according to the author, very frequently. They are chiefly observed in the upper extremities, and are very chronic. A characteristic symptom of these affections, as in tabetic arthropathy, is their painlessness. It is easy to diagnose them anatomically and clinically. Fixation of the joints in the early stage of the complaint, or operative interference in advanced and marked cases, is indicated. —*Lancet.*

ARSENIC FOR TRICHINOSIS.

Dr. W. H. Merrill, Pepperill, Mass., in a very interesting article in the New York *Medical Journal*, reports a case of this very uncomfortable and usually fatal disease in which the administration of liq. potass. arsenitis in 5 drops three times a day, and increased 3 drops per day until the constitutional effects of the remedy became visible, effected promptly a permanent cure in about 25 days from the first dose. During the time as much as 36 drops were taken during the day, but as soon as arsenical symptoms were visible the dose was decreased temporarily. Although arsenic has not heretofore been noted as a remedial in this disease, yet the failure of nearly if not quite all other remedies in cases where the trichinæ were developed, and this case being so marked a success, warrant its trial in future and the publicity that can be given to this remedial.

SULFONAL IN TRISMUS NASCENTIUM.

J. Berenyi (*Pesther Medchir. Presse*) reports the case on an infant which on the fifth day after birth was attacked with trismic convulsions, having five crises in as many hours. These crises continued with greater or less frequency until the eighth day, resisting all treatment. Berenyi then administered sulfonal in 3-grain doses by rectal injection and by the mouth. The crises at once diminished in severity and frequency, and ceased completely on the sixth day, with no further return. The total amount of sulfonal administered was 150 grains, and at no time was there noted any tendency to somnolency or other untoward symptom due to the remedy.

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CLINICAL LECTURE.

CHRONIC COLITIS—CHRONIC NEPHRITIS WITHOUT EXUDATION—CARDIAC HYPERTROPHY AND DILATATION WITH MITRAL STENOSIS AND INSUFFIENCY—SIMPLE ANÆMIA.*

By FRANCIS DELAFIELD, M. D.,
PROFESSOR OF PRACTICE OF MEDICINE, COLLEGE OF PHYSICIANS AND SURGEONS, N. Y.

CHRONIC COLITIS.

Gentlemen: This man, 55 years of age, gives us the following history:

Over twenty years ago, in the army, he contracted a diarrhœa, which, despite treatment, has continued up to the present time. He continues to have from two to five small and watery passages a day, sometimes containing quantities of mucus, sometimes blood. During the last few years he has complained of pain and distress in the right side and back, swelling of the legs and a burning sensation in the feet and ankles. He is unable to work, and has not eaten solid food for the past nine months. He tells us he has been taking opium for the relief of his diarrhœa, but he had stopped this drug eight months ago. I questioned him closely, however, and he admits that he still takes a half drachm of laudanum two or three times a day. The examination of the urine, I am told, shows a sp. gr. of 1020 and no albumen.

Putting the man on the table, I examined his abdomen carefully by palpation and percussion, but fail to find any abnormality; nor would I expect to find any, for the history of this case is a straightforward one of chronic colitis. Whether there be ulceration or simply a chronic catarrh, I am unable to state, but it is certain that this catarrh of the lower part of the intestines has caused changes in the colon so profound by reason of its long duration that the colon cannot be restored to its normal condition.

In this patient before us, besides the colitis, there has been added the opium habit. Though we may believe what he tells us that the quantity of opium he is now taking is considerably less than formerly, yet the *habit* is undoubtedly established. With regard to the treatment of this case, I must confess that very little can be done. The indications are to relieve the diarrhœa and improve the man's general condition. It is idle to look for more. We shall put him upon small doses of castor oil—say 20 drops—together with tablespoonful doses of cod-liver oil twice a day. By this we hope to produce better fæcal passages, but do not expect to improve the condition of the bowel. This medication may be kept up indefinitely. His diet should be largely fluid, milk being the staple article. The question arises, should we try to make this man give up the use of opium? I do not believe it is worth while; he is old, and moreover, he looks like a man who has not long to live. The struggle to give up this habit would not only cause him great suffering but the success of our efforts would be very doubtful. I shall urge him, however, to decrease the dose he is now taking, or at least, promise not to increase it. You hear, he volunteers the statement that he will give up the opium altogether, but of this I am very doubtful.

CHRONIC NEPHRITIS.

This woman is fifty years of age; she has the appearance of having been accustomed to hard work and privation. She has come to the Clinic complaining of

* Delivered at the Vanderbilt Clinic of the College of Physicians and Surgeons.

fainting spells, which she tells us, she has been subject to for about eighteen years. They are produced by worry and excitement and fatigue. At first they recurred about once a week, but lately they have been more severe and further apart. They would come on with a feeling of faintness and trembling all over the body, but without pain or nausea or complete loss of consciousness, sometimes with palpitation of the heart and sometimes without. They would last an hour or two, or perhaps an entire day. During the past year her feet have occasionally become slightly swollen. Her urine has been examined; the sp. gr. is 1005, and it contains a trace of albumen. The radial pulse, I find, is very feeble at both wrists; it numbers 88 to the minute. The heart's action, by auscultation, I discover, is also feeble, but there is no murmur, nor does the heart seem altered in size.

This, therefore, is a case of chronic nephritis without exudation, and though it must have existed for some time, judging by the low sp. gr. of the urine, and produced marked changes in the structure of the kidney, yet it has caused no symptoms except this slight dropsy that has appeared lately. It is an example of that class of renal disease wherein there is nothing much to demand treatment.

This woman has worked hard; has probably been often without sufficient nourishment and has probably used alcoholics. Could we change her condition of living, we would benefit her, no doubt. But this we cannot expect to do. As for the attacks of faintness, they are almost certainly not due to organic disease, but are such attacks as any nervous woman is liable to as the result of worry and over-work. The feeble action of the heart is the only symptom that, at the present time, might demand treatment. This would suggest the propriety of trying a cardiac stimulant. It is doubtful, however, how much benefit would be produced. I should order this woman the fluid extract of digitalis, two minims three times a day. Let her take this for one week, and if she does not improve, I should be inclined to give her no medication for the present; that is, it would not be well to tell her she was receiving no treatment, but give her a placebo and keep her under observation.

CARDIAC HYPERTROPHY, ETC.

I now show you a man, 42 years of age, who says that, with the exception of having had rheumatism off and on for the last thirty years, he has been in good health up to three or four weeks ago. Since this time he has complained of some shortness of breath and oppression over the heart on stooping or on working hard. He has complained also of palpitation at times, though he has been able to work at his trade of street paving up to to-day. His urine is said to have a sp. gr. of 1023 and to contain no albumen. He has been under treatment at the Clinic here, and has been taking iodide of potash and nitro-glycerine. As I take his pulse I note it is soft (which may be due to the drugs he is taking) and also that the artery is somewhat tortuous and the walls hard and resisting. The arterial tension is not increased therefore, but the vessel is the seat of chronic endarteritis. Inspection of the chest shows the apex beat displaced to the left, well circumscribed. By auscultation the heart's action is found to be irregular and intermittent, and not very strong nor yet very feeble. I hear distinctly a systolic and also a presystolic mitral murmur, not transmitted posteriorly.

This man's condition, then, is a serious one. He has endarteritis that has probably existed for a long time, and mitral stenosis and insufficiency, together with considerable hypertrophy and dilatation of the left ventricle. How can we account for the fact that, with this state of things, the patient has been able to continue at hard work and free from symptoms until within the past month? I think the explanation is to be found in this—that his kidneys have remained in good condition. This is evidenced by the examination of the urine. Should this man be sent to bed or confined to the house and put upon fluid diet, as you have frequently heard me advise in cases of irregular and weak heart with arterial disease? I do not think it necessary. On the contrary, I believe he will be better for a generous diet and moderate work and exercise in the open air. In the mean while we will try to put the heart and pulse in better condition. We should bear in mind that in these cases the condition of the circulation is different at different times; the arteries are sometimes contracted, at other times not. Hence it will be necessary to change the

remedies according as this or that indication arises. Two weeks ago we presume there existed a high arterial tension, since nitro-glycerine was given. Now this condition is not present. The irregularity and the intermittent action of the heart are the pronounced symptoms to-day, and for these the fluid extract of digitalis, m. ij., t. i. d., should be employed. And if it be certain that two weeks ago there was a condition of contracted arteries, potassium iodide, gr. v., should be added to the digitalis. I use Squibb's fluid extract of digitalis now altogether in cases of heart disease, in preference to the tincture and infusion. Its action is more certain and reliable; even a fraction of a minim will often produce the desired effect, and two minims may be considered a good dose. This patient may continue fairly comfortable doing his work, and free from dyspnœa and palpitation for the greater part of the time for some years, notwithstanding the serious disorder of his heart.

ANÆMIA.

This young girl, 21 years old, comes before us with the following symptoms: For the past three years, she says, she has suffered from attacks of shortness of breath, pain about the heart, nausea and vomiting and œdema of the feet. Under treatment these symptoms would subside but to return again, and in this way they have subsided and recurred several times during these three years. Her pulse, I find, is 120, but not feeble, and the artery is not changed nor the tension abnormal. Indeed, such a pulse would not direct attention to the heart. The examination of the heart is also negative; its action is regular. The urine does not contain albumen and its sp. gr. is 1022. Investigation shows, therefore, that the heart, kidneys and liver are not at fault, but attention should be directed to the blood. This should be examined; the amount of hæmoglobin and the number of corpuscles estimated. This would probably settle the question of diagnosis. There seems to be no doubt from the history, however, that the patient is suffering from the simple anæmia of young women. Such cases are apt to improve and then grow worse, and so fluctuate between good and bad health for a long time. The treatment, of course, is iron, but it must be persevered in. It is necessary, in fact, to administer it the greater part of a year or two, or until we are satisfied that the disposition to relapse has been removed.

PTERYGIUM.

By P. D. KEYSER, M. D.,

PROFESSOR OF OPHTHALMOLOGY AT THE MEDICO-CHIRURGICAL COLLEGE, OF PHILADELPHIA.

Gentlemen:—Pterygium is a growth of the bulbar conjunctiva of a triangular shape, with its apex pointing towards the cornea, and when trangressing on the cornea in its progress towards the centre, invades only that side of the cornea from which it comes. It is peculiar in that it very rarely, if ever, passes over the centre of the cornea; when it reaches that point its advancement seems to stop, but it is apt to spread out on the sides, becoming wider and thicker. Its shape, position and manner of growth are of diagnostic value.

The growth in the conjunctiva may be thicker or thinner, or broader or narrower, according to how it forms in the tissue. It is really a hypertrophic condition of the conjunctiva, containing vessels of various calibre and number. At times, strictly speaking, it is solely in the conjunctiva, which can be readily moved or raised over the sclerotica; at other times, especially when thick rigid and tendinous, it may be somewhat attached to the underlying capsule of the sclerotica. When on the cornea, it is thick, rigid, tendinous and firm, like connective tissue in neoplastic formations.

It is formed generally on the inner side of the ball, at times on the outer, sometimes on the inner and outer sides together, growing towards each other, and very rarely on the direct upper or lower surfaces. Its growth, however, is in the conjunctiva, over the line of the recti muscles—very few cases have been reported lying between the recti muscles. It generally starts from the inner canthus as a lot of small vessels, with one or two longer ones, extending beyond the others towards the corneal region. With these vessels, a certain amount of thickening of the tissue takes place, which spreads out fan-like, and slowly enlarges and thickens, creeping towards the edge of the cornea. When up to the cornea at the limbus conjunctivalis, it seems often

to be arrested in its long or meridional axis, and for years may not encroach on the cornea, but all the time becoming thicker and broader in the conjunctiva. At times it may be inflamed, and at others perfectly quiet and cause no trouble or ill feeling in the eye. As long as it remains in the conjunctiva the vision is not in the least affected by it. But after some time, which may be years, it begins to develop in or across the cornea; as it does so it assumes a tendinous or whitish appearance, resembling often a thick scar. When it begins to creep across the cornea, it may be noticed that there is a line of opacity spreading a considerable distance in the corneal tissue ahead of the pterygium itself, showing a certain amount of inflammatory action and filling in of the clear nutrient canals of the cornea. Two forms of pterygium have been distinguished—the true and the false—which differ only in a few particulars as to peculiarities of shape, thickness, etc., but are the same in character as to generalities and treatment, and therefore I describe to you to-day, with these cases, the general form and appearance, so that you can diagnose such cases and attend to them properly.

It has long been a mooted question as to what is the cause of this affection. It is a well known fact that it is an inflammatory process, but of a very subacute or chronic form, causing very little, if any, inconvenience for a long time. Some claim it is the result of small ulcers of herpetic character, which may occur in the conjunctiva and in the cornea, the healing and shrinking of these ulcers drawing the conjunctiva towards them. Others again do not agree in this view. The idea has also been given that this affection depends on venous thrombosis, or narrowing of a corneal and of a vena vorticosa, thus developing disturbances of circulation in the corneal portion of the ciliary arteries penetrating the recti muscles. In later years it has been claimed to originate from micrococci which becomes deposited in the conjunctiva and creeps along over on the cornea with a certain amount of inflammatory process following its track.

Whatever may be its cause, we well know its appearance, and when once developed and formed, to a certain degree it is permanent, and can only be removed by operative interference. It is found mostly in advanced life and very seldom in young people, while there are certain occupations in which persons appear to be prone to it.. It is seen very frequently among seamen, even in comparatively young men. A former student of mine, Dr. Chandler, of the Island of Barbadoes, informed me that a great many of the colored people on that island were affected with it.

Some years ago, I took up the study of inflammatory diseases arising from strain, from defects in refraction of the eye, and in all cases of pterygium, whether in the conjunctiva alone, or on the cornea, I found some marked degree of compound hypermetropic astigmatism.

A curious feature in connection with pterygium, is that it will creep across to the centre or apex of the cornea and there stop. I may almost say that it has never been known to grow completely across the cornea from one side to the other; we may, however, have another like growth starting from the opposite side, either at the same time or later, which will grow until its apex almost reaches the centre of the cornea, but never quite meeting its fellow of the opposite side.

In looking over the field, we may correctly say that we really know nothing positive as to its cause, except that it commences as a small ulcer, with the small vessels of the conjunctiva running towards it, which gradually thickening grows toward the cornea, on the edge of which it sometimes remains for five, ten, fifteen or twenty years, and all at once again begins to grow and spread across the cornea. When this occurs, there is only one remedy, and that is operation as quickly as possible. If it grows over to the centre of the pupil, no matter what method is used in its removal, it leaves a cicatricial opaque condition of the cornea, leaving it just like ground glass, so that the patient is disappointed when he does not see perfectly after the operation. Therefore, always advise the removal of this growth as soon as it begins to spread over the cornea. It is not wise, however, to operate before this time, as it may take many years before such a growth will commence to invade the cornea, and it does no harm until it starts that stage in its development.

One thing I want you to remember is, that this condition is not cataract. The common idea among the people, and, I regret to say, among some physicians, is that cataract is something which grows

over or on the eye. I have had physicians send cases of pterygium to me under the name of cataract. Cataract is an opacity of the lens and occurs naturally in the eye-ball, while pterygium is an external growth.

Many methods have been proposed for the removal of pterygium. The first was to grasp the growth with a pair of forceps and cut it off with the scissors, leaving a triangular opening in the bulbar conjunctiva to fill with granulations. Where the growth was large on the cornea, it was shaved off with a knife and then the scissors used to remove the conjunctival part. But in this operation, it was often found that a return of the growth occurred, which was more difficult to remove on account of a firm attachment to the sclerotica. To remove this secondary danger, an improvement was made in not cutting the triangular piece out of the conjunctiva, but cutting back along the margin on either side of the growth, and allowing it to fall down and recede by gradual absorption, while the conjunctiva is brought together over the wound, covering up the space from which the growth has been removed. Then again, instead of letting the excised part fall down for a long, slow absorption, a good improvement was throwing a ligature around it and so causing it to slough off in a few days, while the triangular space, being covered by drawing the conjunctiva over it, heals up. Ligation has been tried. Szokalski suggested a very ingenious method of passing ligatures around the growth and causing it to slough off. This method, however, is seldom used.

Transplantation has been made with success, especially in very large and broad growths. This is done to relieve or prevent the retraction of the conjunctiva, which is liable to take place where a great amount of that tissue is removed and interferes very much in the mobility of the eye-ball. In this operation, the growth is turned up into an incision in the conjunctiva on the upper part of the ball. But if the pterygium is very broad it is much better to split it down the middle after its separation from the cornea and conjunctiva, and transplant one half upward and the other half downward.

A very easy and simple, as well as successful, method, has been lately introduced for the removal of this growth from the cornea when its attachment is not too deep in the corneal tissue. Generally, the attachment of the pterygium in its growth over the cornea, is superficial and only to the anterior layer, from which it can readily be torn, so, by forceps or a strabismus hook under it, it can be pulled away from the cornea. The apex recedes and the conjunctiva is brought together on the line contiguous to the cornea.

Now, gentlemen, I have two well-defined and very different cases of this disease to present to you to-day. The one I first show you has been growing for years; you see the patient is an old man. The growth extends almost to the centre of the pupil and spreads out in the conjunctiva, fan-shaped, towards the inner canthus, so broad as to cover almost that side of the ball. It is too large to dissect up and remove, so I shall divide it and transplant one half above and the other half below. I first take up the thick tissue in my forceps, and with the scissors make a small opening along the upper border of the same, near the cornea, and one on the lower edge immediately below it. Through this I pass a strabismus hook so as to lift it up, drawing from the cornea, at the same time grasping the corneal part with my fixation forceps to aid in pulling the growth off the cornea. Now, having done so, I cut on either side back to the ball, and dissect it up loose, and then make with my scissors a curved incision in the conjunctiva above the cornea on the top of the ball and an incision in the lower part. I now split the pterygium straight down its centre to the base and then turn each half into its new position in the conjunctiva and fasten by sutures. The second case I show you is of much smaller growth, and not spread out much in the conjunctiva. In this case I shall only draw or tear the corneal attachment loose in the same way as I did the former operation, in and let the apex of the pterygium recede back from the cornea, and then draw the conjunctival wound together to cover the gap made. The thickened part, or apex, gradually shrinks away, so that in a short time very little, if anything, remains to be seen.

This tearing the growth from its corneal attachment appears to have many advantages, and is a great improvement on its removal by cutting. When cut or shaved off, considerable opacity remains, and often a thickened, firm, tissue-like prominence.

The attachment seems to be rather superficial, not passing into the deeper tissues of the cornea, but fastened by little filaments which take only slight hold upon the anterior layer, so that simply by pulling it gently, the attachments are broken loose, and a more or less clear cornea remains.

COMMUNICATIONS.

THE ORGANS OF HEARING AND LIFE INSURANCE.

(Translated from the works of Dr. Josef Gruber)

By LAWRENCE TURNBULL, M.D., P.H.G.,
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and
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The examination of a candidate for admission in a life insurance company by the aural physician should solve the three following questions:

First.—Is the life of the individual in question endangered by the condition of his organs of hearing; if so, to what degree?

Second.—Has the ear affection any connection with other local or general affection; if so, what is the connection?

Third.—What is the relation of the special disturbed function of the ear, more especially with reference to the following of the vocation, or would it invalidate the policies or militate against the individual to be insured?

Everyone who is even partially initiated will be able to perceive by these questions alone what knowledge is required for their proper solution, and how, in doubtful cases, a recourse must be had to the judgment of the more experienced. Even the judging of the average case will be made more easy to the less experienced physician if the points for the formation of a diagnosis are indicated to him.

The statements of the patient, as elicited by oral examination, will be of the greatest interest, but we must be guarded, so as not to be too credulous, and try always to ascertain, by an objective examination, whether the patient's statements can be made to harmonize with the existing condition of the organs of hearing.

It is not intended here to say that the statements of the individual must, in every case, be confirmed by a positive or negative result of an examination, for the objective examination generally gives a negative result in those cases where the functional disturbances may be the most detrimental to the individual's capability; *e. g.*, in those produced by a primary or secondary labyrinthine lesion, where the objective examination gives frequently a completely negative result. It is the case of those individuals who desire to be admitted into a life insurance company that they attempt to conceal their aural affections, which occasionally are very dangerous, or they try to at least underrate the significance of their ear diseases and then the objective result (of the objective examination) must correspond with the respective statements. We are in favor of allowing the individual about to be examined to relate his own history of the affection, and then complete and purify his statements by appropriate questions. Very often the physician's attention will thus be led to points which he otherwise would have overlooked.

The objective examination of the organs of hearing may be divided into an ocular, tactile and auscultatory, and should be conducted with the greatest exactness, more especially as regards the relation which it bears to the organism at large. In my hand-book, published by C. Gerold's Son, in Vienna, the various methods of examination are carefully detailed. The limited space here does not admit of a more thorough consideration of the subject, and I, therefore, must refer to that work, and proceed to at once, commencing in anatomical order from without inwards, mentioning and elucidating those symptoms which are of the greatest importance to the diagnosis in the prognosis of diseases of the ear.

A. External Auditory Portion.—First we consider the neighborhood of the pinna. Inflammatory swellings of the soft part, irritative swellings of the lymphatics, especially those in the maxillamastoid fossa, and at the mastoid process, fistulous pus-tracts in this region, as well as swelling of the mastoid process, especially when all these appearances last long, they are frequently to be regarded as the consequences of serious affections of deeper structures, dangerous to the life of the individual.

Great attention must be paid to ulcerated surfaces in this region and those on the pinna, for they are occasionally the expression of a carcinomatous degeneration, only to be diagnosed by the use of the microscope. Fistulous tracts should be explored carefully, which may lead to a detection of the condition of the bone and of the original seat of the affection. Occasionally in the swelling of the lymphatics in the mastoid region is connected with affections of the ear, which is only a part appearance of a general lesion, namely syphilis and scrofulosis. I must here emphasize that I have often seen cases where the appearances in and about this region were the first signs of a constitutional syphilitic affection that had made itself manifest. Ulcers of the pinna itself are occasionally the result of constitutional syphilis, or they may be of a lupus or carcinomatous nature. In a far progressed gouty affection, deposits are not infrequently found in the pinna. Hæmatomes occur here as neoplasts of a local importance, only the so-called othæmatom might in one case or another be connected with other affections of the vascular system. Foreign masses in the external auditory canal, including the accretions of cerumen, must first be removed in an appropriate manner, so as to gain an accurate insight into the deeper sections. Here it may be mentioned that occasionally cholesteatomes proceed from the deeper sections of the same into the auditory canal, where the newly formed mass easily mixes with cerumen, assumes its color, and may give rise to great errors.

Inflammatory affections of the external auditory canal are to be judged with reference to the functional data and general appearances. When such exudative processes are connected with great swelling of long standing of the soft structures, and especially when connected with increase in size of the bony portions, when polypi appear in the auditory canal, when probably pieces of bone have escaped, they always awaken a suspicion of caries or necrosis. I wish particularly to emphasize that only very rarely can a diagnosis with the ordinary surgical methods of examination be obtained in an affection of bone located in the deeper seated portions of the temporal bone, because the probe, in most cases, does not reach the affected portion at all. The diagnosis must be made with the aid of the microscope, periodically examining the masses removed from the auditory canal.

In bone implication, small particles will be found which will furnish the surest proof of the presence of caries or necrosis, especially if the examination has been conducted with appropriate care. When polypoid growths are present in the auditory canal, a microscopical examination will furnish a solution of their specific character; some, although rare, appear as carcinomatous neoplasms.

The appearances on the membrana tympani call for the most thorough consideration, because from it we can diagnose not only those affections that have their seat in the membrane itself, but frequently we can, from it, judge the condition of neighboring organs, especially the bearing of the scructures of the middle ear. Opacities of the membrane are most frequently connected with diseases of the structure of the middle ear, especially when they present an arched (semi-circular or circular) appearance; these affections may, in a great degree, endanger the power of hearing. Polypoid growths on the membrane and perforations with contemporaneous continuous or periodical otorrhœa go frequently hand in hand with dangerous inflammatory diseases, and merit the greatest attention. Perforations of the membrana tympani become free from danger to the deeper structures generally only when the otorrhœa has long ceased and the mucous membrane has become sclerosed.

B. Middle portion.—In this portion of the ear we find mostly those diseases localized which, on one hand, may become dangerous to the life of the individual, and, on the other, cause difficulties in hearing, or other unpleasant consequences. To expose the condition of this portion of the organ of hearing, the physician must direct his attention to all those parts which stand in any relation with it: the auditory canal and the membrana tympani, and also the structures in the neighborhood of the mastoid process, the nasal and pharyngeal regions; for not infrequently important and substantial affections of the middle ear spread their noxious influences hither, or are occasionally even the result of primary affections of these structures. In judging of the results obtained by the various methods of examination, the general condition must be considered,

and we must not precipitatedly make a diagnosis, because the most experienced is often enabled to make a proper diagnosis only after repeated and protracted examinations. This is more particularly the case with reference to the so-called dangerous caries or necroses, which are often seated so hidden that they do not betray themselves to the most experienced eye. The microscopical examination of the discharge from the ear, or a fistule, as mentioned before, will soonest and best furnish an explanation. Since the long-existing and profuse otorrhœa is no sure sign of caries, so we, on the contrary, must not conclude the opposite to be the case from a temporary or complete cessation of the same, and the physician must build up his diagnosis and form a prognosis from all the appearances within and without the organ of hearing.

Let it be mentioned here once more that the nasal and pharyngeal examinations must be conducted with the greatest minuteness, for occasionally there occurs in the middle ear only the simplest signs of an inflammatory process, while in the nose and pharynx syphilitic and carcinomatous degenerations are carrying on their destruction.

C. Internal Ear.—Life is seldom, if ever, endangered by primary affections of the labyrinth. The connections of the internal ear serve frequently as conductors of dangerous diseases from the middle ear to the brain or its membranes, and thereby cause a fatal termination. . On the other hand, it is evident that diseases of the brain of a dangerous character extend to the auditory nerves and the labyrinth, and from this point betray their existence, and, like general lesions, assert their noxious influence upon the organ of hearing.

Concerning the capability of the individual to self-support, or of the expected or already existing invalidity of an individual, we will have to consider, not alone the existing forms of ear disease, the degrees of disturbances of hearing, and other subjective symptoms, but also the occupation of the patient.

A rationally managed insurance company will allow this rule to stand at the acceptance as well as in the act of declaring a policy invalid.

CASES AND CONCLUSIONS.

By LAWRENCE TURNBULL, M. D.

The great importance of a critical examination of the organ of hearing before a policy of insurance is issued to an individual suffering from ear disease, is well shown in the preliminary article by Professor Gruber, of Vienna, translated by my friend and pupil, L. W. Steinbach, M. D. Cases are frequently presented for our examination in which, to all appearance, the individual is in perfect health, yet there is a slight discharge from one or both ears. We cite a case in point. A gentleman, W. H., aged forty-two, presented himself for our examination, and he made very light of a discharge from the ear, which he stated had existed for years and only required cleansing once a day, and gave him no trouble. We told him of the great risk he ran of a sudden cold being taken during imprudent exposure which might cause his death. He was not considered a good risk. There was a perforation of the drum membrane and discharge. His family history was good. His father had lived to a good old age. This discharge, in connection with the grippe, was ultimately the cause of this young man being cut off before he reached the age of 45 years, the normal period of longevity. This suppuration from his ear of so long a continuance had destroyed the lining membrane which covers the delicate bone of the part and this was followed by ulceration and necrosis of the bone forming the roof of the middle ear (tympanum), and the next scene was abscess of the brain and death. Another form of ear disease which would prevent the issuing of a policy as a first-class risk, is in cases where there is disease of the bone, the temporal especially being invaded, propagation along the Fallopian canal; involvement of the facial portion of the seventh pair of nerves, causing what is termed facial paralysis. We have met with several cases of this form of disease of the ear, and three of them recently. The first arose from an acute attack of chronic catarrh of the tympanic cavity, which had existed for years with the entire loss of hearing for one ear, and caused another chronic tympanal disease, with very imperfect hearing, in the other. Fortunately local depletion and aconite relieved the prominent symptoms

of fever, etc., in the first instance, and in the other with very large doses of iodide of potassium, even up to 100 grains a day, recovery occurred entirely in a month's time. The second was the result of a chronic discharge from the ear with loss of the drum membrane followed by extensive disease of the bone, which had been treated three years before with success by scraping, and the patient had been free from discharge and pain for three years. The disease again showed itself by a bloody discharge with severe facial paralysis, loss of power over the face, and falling of the eyelid, so that the latter had to be supported for months with a strip of isinglass plaster. A prolonged treatment by cleansing, antiseptic washes and the internal adminstration of the iodide of potassium, and then the "four chlorides" have almost restored the function of the nerve and the power of the eyelid and face, but it is liable to relapse. The third case was a patient in Jefferson College Hospital. The condition of the ear and face was the direct result of the poison of secondary syphilis, and was cured by a long continued course of mercury.

Another large class of cases which cannot be accepted as first-class risks, are those where we have diseases of the mastoid cells (just back of the ear) and forming the air cells of the middle ear. Numerous cases of sudden death follow the neglect by the surgeon to remove the diseased bone.

The last class of cases are those apparently of slight ear disease in which we have a thin watery discharge during the early state of tuberculosis, but which is followed and kept up by the increase of the cough, and in which no local or general medication is of any avail. Persons with a persistent cough, dullness at the apex of the lung, and a discharge from the ear we consider far from being a good risk for life insurance. Simply defective hearing, so that the individual cannot hear the human voice loudly spoken within a few feet, is apt to lead to accidental death in crowded streets or at a railroad crossing. Some insurance companies, both in this country, in England and on the continent of Europe, refuse under any conditions to accept any one suffering from an otorrhœa. We fully agree with our revered friend, the late Dr. Cassells, in that this rule of procedure is too sweeping, for there are many cases of ear disease with tissue lesion only in which there are reasonable grounds for saying that, inasmuch as the ear discharge is simply an excessive secretion from hypertrophied tissue, or at all events not the results of an ulcerative process either of these or the underlying bone, there may be a healthy constitution with no tuberculous, syphilitic, scrofulous or other history.

Under proper treatment many cases can be permanently cured and all discharge arrested; therefore, such cases should be accepted. In severe cases there might be an additional increase of premium. All suspected and questionable cases should in every instance be submitted to the critical examination of an expert in otology.

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OPHTHALMIA NEONATORUM AS A CAUSE OF BLINDNESS.*

By T. B. SCHNEIDEMAN, M. D.,
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My object in bringing this subject before the Society is to direct attention to a disease which is responsible for about one-third of all cases of blindness, of which a most important means of prevention—that of public legislation—can only be obtained by the active intervention of medical societies. The following case is presented, not because of its novelty, unfortunately, but as somewhat typically representing the lamentable result of negligence or ignorance:

H. M., age three. Both eyes became sore when five days old. O. D.: Dense adherent leucoma lower inner portion of cornea. Remainder of cornea hazy, stretched blue-gray iris in contact with it. Globe apparently somewhat distended; leucoma prominent but easily covered by lids. T.: Normal. O. S.: Leucoma slightly denser and more prominent but not larger. Broader space of translucent cornea than O. D. R. and L. light perception.

The subject has been very thoroughly worked out in Europe, and a mass of statistics has been accumulated. According to the report of the Royal Commission on the Blind, published in 1889, 30

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per cent. of the inmates of the institutions, and 7000 persons in the United Kingdom, have lost their sight from this cause. Professor Magnus, of Breslau, finds that no less than 72 per cent. of all who become blind during the first year of life are rendered so by purulent ophthalmia; and even of those who become blind before the twentieth year of life, it constitutes as much as 23.50 per cent. Looking at the subject in another way, he shows that of 10,000 children under five years of age, 4.28 are blinded by purulent ophthalmia. In the blind asylums of Switzerland the proportion who have lost their sight from this disease is 26 per cent.; in the asylums of Austria, Hungary, and Italy, about 20 per cent.; while in Spain and Belgium it falls to about 11 or 12 per cent. And in this city, Dr. Harlan, as the result of examination of the eyes of 167 inmates of the Pennsylvania Institution for the Blind, found that 55 owed their affliction to purulent ophthalmia, and more than half of these were of the form occurring in infants.

The lesson taught by such statistics is not simply that ophthalmia of the newborn is the most common cause of blindness; if that were all, they would, no doubt, still preserve a melancholy interest, but they have a much greater importance, for they tell us that it is quite within our power to have prevented the great affliction of blindness in one-third of those who are deprived of sight. For it is hardly too much to say that no one should lose his sight from this disease, not only because it is quite amenable to treatment, if this be instituted from the beginning, but because the disease itself can be prevented in most instances if those who have the care of mother and child understand the nature of this affection.

Ophthalmia of the newborn is an *infectious* disease, and can only occur after the infectious matter has come into actual and somewhat prolonged contact with the conjunctiva. The noxious matter is in every instance derived from an inflamed vagina (or urethra), or from another eye. In the great majority of cases infection takes place from the vagina, and it is to be remembered that the disease is not caused by the secretion of a specific (gonorrhœal) catarrh only, but that it may be produced by the secretion of a simple leucorrhœa, or at least by what is recognized as such clinically.

As regards the period when infection occurs, this may take place either during or immediately after birth, or at some subsequent moment. In the former case, the *materies morbi* is derived directly from the vaginal secretion. The child passes through the parturient canal with closed eyes, hence during the passage of the head the secretion can only penetrate into the conjunctival sac in very small amounts, if at all, but it remains adherent to the eyelashes and edges of the lids, and can readily gain an entrance into the eyes as soon as these are opened and the child winks upon the escape of the head. Infection may take place during birth, if anything occurs to displace the soft parts of the face, as may happen in protracted and difficult labors, large size of head, etc., conditions more likely to be present in primiparæ, and with the larger heads of male children. But the time most fraught with danger is usually the moment the head escapes and the child first opens its eyes. In the majority of cases, infection takes place at some time during labor, and the disease first manifests itself from the second to the fifth day; if it does not appear until later, infection took place subsequent to birth. This may happen by the transference of secretion to the child's eyes in various ways, as by the hands of the attendant, by soiled linen or sponges, etc.; but the lochial discharge, as such, has been found to be incapable of causing the affection, if the woman be free from disease.

The discovery of the gonococcus has led investigators to examine the secretion of purulent ophthalmia for the same organism—and in the vast majority of cases examined it has been found to be present therein also; still, different observers appear to have reached results not entirely in accordance as to the relative frequency with which this organism is present. Cases do occur in which it cannot be found. Hence the attempt has been made from a bacteriological point of view to recognize different forms of the disease—a specific form and simple inflammatory forms. As stated above, the secretion of simple vaginal catarrhs are capable of causing purulent ophthalmia.

Formerly this disease was attributed to a variety of causes, such as injuries received by the eyes during birth, icterus, chilling of the body, intense light, etc.,

but these views are, of course, no longer entertained. Ordinary pus and even decomposed pus cannot produce it. Purulent secretions from lachrymal abscess and caries of the orbit frequently get into the eye, and do produce inflammation of the conjunctiva, but not the ophthalmia of the newborn with its great liability to involvement of the cornea. Putrid flesh, putrid blood, and even pure cultivations of various microörganisms, have been introduced into the conjunctival sac without any ill effect.

Prophylaxis, to be efficient, must, of course, first of all recognize the infectious nature of this affection, and secondly, the source whence the infectious matter may be derived.

Among general measures are to be placed all influences which can be employed to impress upon the public the dangerous character of all affections of the eyes of young children. Like all similar diseases, this affection is most prevalent and destructive among the poorer classes, who do not usually employ a physician to attend them in confinement, but rely upon a midwife too often but little better instructed than the woman she attends.

In some dispensaries for the treatment of diseases of children, a small tract is handed the mother or attendant who brings the child, giving advice as to the proper care of infants, their diet, bathing, etc. A few lines might be added, calling attention to the serious nature of this inflammation—ignorance of which and the proneness to ascribe every affection to "catching cold," which will get well of itself, is responsible for many ruined eyes. With this end in view, it might be advisable to have articles appear in the public prints from time to time explaining the danger of the disease in question, and urging the importance of immediately attending to every case of inflammation of the eyes of the young child. Even the ignorant classes understand the dangerous nature of certain other diseases, such, for example, as diphtheria and scarlet fever, and if ophthalmia of the newborn could be added to these, the deplorable results of neglected cases would be less frequently observed.

To reach this class (which is undoubtedly responsible for the great majority of those unfortunates who have become blind from this disease, namely, midwives), it has been proposed to compel all such to report every case of ocular inflammation at the earliest possible moment to some physician. Such laws are in force in certain countries of Europe, and there appears no good reason why a similar law might not be enforced in this country, just as there are laws requiring other contagious diseases to be reported. If this could be done with any degree of efficiency, it would do more toward abolishing loss of sight from this cause than any other measure. The State of New York has such an act in operation, requiring midwives and nurses to report every case of inflamed or reddened eyes occurring within two weeks after birth to some legally qualified practitioner within six hours, under penalty of a fine or imprisonment, or both. This law has been in operation for a little more than a year, and it is hence too early to obtain much information as to its practical working. A few convictions would direct the attention of that class which it is desired to reach to this subject, and in this way, at least, be productive of a certain amount of good.

As regards special measures of prophylaxis, these were clearly formulated as early as 1807 by Gibson, in the following ing principles, which all later experience has tended to confirm. They are, first, to cure the leucorrhœa of every pregnant woman when possible; or failing in this, second, to disinfect the vagina during labor; and third, to remove the secretion from the child's eyes immediately after birth by a fluid which renders the secretion harmless.

Notwithstanding their importance, I shall here pass over the first two and consider briefly the third of these indications. Of all the methods employed, none have yielded better results than the one recommended by Credé. This consists in dropping into the eye a two per cent. solution of nitrate of silver after simple preliminary washing with clean water. Other agents, such as carbolic acid and boracic acid, have been tried, but none gave results so satisfactory as the silver, perhaps because the latter has the power of penetrating deeper into the tissues. As a proof of the efficacy of this procedure in diminishing the number of cases of purulent ophthalmia of the new-born, the following figures, all obtained from the same hospital and the same attendants, furnish the evidence :

Children.	Treatment.	Per ct. of blenorr.	Per ct. of catarrh.	Total.
1092	No treatment . .	4.75	14.5	19.25
1541	2 per ct. of carbolic acid	1.42	.6	7.42
1250	2 per ct. of silver nitrate	0.72	4.72	5.44

And similar good results have been obtained in other lying-in hospitals. Still, this method, which is somewhat severe, is not necessary in every case in private practice, although, even if unnecessary, it is quite devoid of serious danger. As a milder measure, simple washing the eyes with clean water as soon as the child is born has been found efficient in diminishing the number of cases of the disease —while in any case in which there is a history of copious purulent discharge from the vagina, it would be advisable to employ the silver solution as recommended by Credé.

As regards the disease itself, it is almost superfluous to present any formal description; its phenomena are so characteristic that it is impossible to mistake its nature when fully developed. The swollen and reddened eyelids, the upper drooping and partially overlying the lower, the great difficulty or even impossibility of opening the eyes, the profuse purulent discharge welling forth as the lids are gently separated by the finger, the pain and heat, the swollen conjunctiva, rising like a mound, in which the cornea is buried, all these go to make up a picture which cannot be overlooked nor confounded with any other. But that every inflammation, however slight, affecting the eyes of a new-born child may, if neglected, become the fully developed disease, and that, too, in a day or two, should always be in the mind of every one who has any connection with the case.

The danger of this disease consists, of course, in the great liability of implication of the cornea, leading to perforation of this structure, with the serious results dependent thereon. It was formerly believed that the cornea, being an avascular structure, became affected from interference with its nutrition by the pressure of the swollen conjunctiva, but while such pressure may be unfavorable to the nutrition of this structure and predispose it to yield more readily, the direct cause of the corneal disease is infection from the microörganisms which have their nidus in the profuse purulent secretion, upon the recognition of which depends the rational and efficient treatment of this disease. This consists, first of all, in the removal of the pus from the conjunctival sac as soon after it is secreted as possible; and second, to render innocuous any portion of the secretion which remains in the eyes by appropriate germicides; and thirdly, to act upon the inflamed secreting membrane by some agent capable of modifying this surface and checking or diminishing its secretory activity for the time being.

The particular means adapted to carry out these indications are various, and the methods selected vary somewhat, according to the preferences of different physicians. To disinfect the conjunctival sac almost all the antiseptics employed in general surgery have been used, and with more or less good effect. The following plan has been found so efficient as to leave little to be desired: The attendant should remove the pus once every hour during the height of the disease; this can be done by gently separating the lids and flooding the conjunctival sac repeatedly with an ordinary pipette or dropper until the cleansing fluid returns clear and unmixed with pus. The fluid employed is a rather strong solution of bichloride of mercury, 1 : 2000. Besides its mechanical effect in flushing the sac and so removing the pus, it is one of the best germicides that can be employed and withal entirely safe. Other agents might be made use of, such as carbolic acid in two per cent. solution, saturated solutions of boracic acid, though the latter seems inert as a germ destroyer, at least according to laboratory experiments, nitrate of silver, etc., but none of these agents have any advantage over the bichloride. To meet the third indication, to modify the inflamed membrane, a rather strong solution of nitrate of silver, ten, twenty, or even forty grains to the ounce, should be applied once, or perhaps twice, in the twenty-four hours to the everted lids by the surgeon. The application can be readily made by wrapping a pledget of absorbent cotton around a match stick, dipping into the silver solution until saturated and then gently and thoroughly applying it to the palpebral conjunctiva. No subsequent washing with sodium chloride solution is necessary. The above treatment, simple as it is, gives results entirely satisfactory. I do not recall a single case in which it was practiced that did not result in perfect recovery without damage to the cornea, although in some cases the disease had

existed for a number of days and in a number of instances the cornea was so greatly infiltrated when the patient first came under treatment as to cause fears of immediate perforation. In those cases in which the cornea becomes affected, as evidenced by partial opacity, atropine, or, in some cases, eserine, should be instilled into the eye—for if, unhappily, perforation should occur, the eye will be more likely to preserve some degree of useful vision if prolapse of the iris can be avoided.

If one eye only is affected, the question arises how to prevent infection of the other eye. The shield, to protect the sound eye, is not applicable in infants as it is in adults. Great cleanliness, constant removal of the secretion, making the child lie on the affected side, will prevent infection in many cases. It might also be advisable to use the bichloride or the silver solution as a prophylactic measure.

Finally, in those cases in which perforation, with its usual results of adherent iris, etc., has occurred, something may be done by operative interference if any portion of the cornea remains clear. Here the indications are to free the iris from its adhesions to the cornea lest total staphyloma supervene. This procedure may be difficult to carry out, may involve extraction of the lens, and in any case would hardly give more than perception of very large objects. —(*For discussion, see Society Reports.*)

SOME MOOTED POINTS CONCERNING THE VOMITING OF PREGNANCY.*

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In discussing the etiology, symptomatology, and prognosis of the digestive disturbance associated with gestation known as morning sickness, or the vomiting of pregnancy, it becomes necessary at the very outset of a comprehensive study of the subject to exclude those forms of gastric trouble which, while often accompanying this purely physiological process, are nevertheless not dependent upon it for their existence, but upon some preëxisting morbid condition which is simply aggravated by the changes incident to gestation.

From a failure to appreciate and differentiate between these forms of gastric disturbance is largely due the confusion and misconception which is so general, hence the existence of such a multitude of views as to the cause and gravity of the vomiting of pregnancy.

It becomes necessary, therefore, that we state clearly that when we speak of morning sickness we do not include the so-called vomiting *in* pregnancy, but confine our remarks solely to the vomiting *of* pregnancy. Without further explanatory remarks, let us proceed to a consideration of the subject from a scientific standpoint, ever mindful, however, how easy it is to advance a theory and how difficult to find evidence to support it. That the occurrence of vomiting without apparent cause in females who have exposed themselves to the risk of conception is a sign of much importance is generally admitted, since it so quickly follows cessation of menstruation and, therefore, further tends to confirm the presumptive evidence of pregnancy. With reference to its etiology, one finds as many views as there are stars in the sky, each differing from the other in magnitude and brilliancy even as these distant orbs of light. Let us, then, turn away from such a merry-go-round of medical opinion and seek to discover the truth in the realms of anatomy and physiology rather than in the domain of idle speculation.

Coincident with conception, we find a general rise in the intra-pelvic blood pressure resulting in increased activity on the part of all the viscera therein contained which are concerned in the process of reproduction. Cells heretofore carrying on a passive existence now spring into a high state of activity. Likewise there occurs hyperplasia and hypertrophy of tissue which is especially rapid in the uterine muscular elements. Nerves, which in the unimpregnated condition possess but a low grade of sensibility, now become highly sensitive and transmit readily to their respective centres slight disturbances which under other circumstances would fail to throw them into a state of activity. What relation, one may very properly ask, exists between the vomiting of pregnancy and this exaltation of the nervous system? A causal one, most assuredly!

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Can one fail to realize that this is a symptom of pregnancy due to the change in the nervous equilibrium induced by the process of gestation? Surely not. Rather are the nausea and vomiting expressions of a reflex irritation, having its origin at the end-organs of the uterine nerves, which, as we have seen, are in a hyperæsthetic state. As the growing ovum demands, day by day, an increased space for its development, these end-organs are subjected to a varying degree of irritation, which is transmitted to the centres and thence reflected out along the nerve filaments distributed to the stomach. Why this affection is of more frequent occurrence and of greater severity in the first than in subsequent pregnancies one can readily understand by comparing the cavities of the primiparous and multiparous organs.

We find in the former that the uterine muscular walls are convex and nearly, if not quite, in apposition, hence the capacity of the organ in these females is relatively less. Not so the multiparous uterus, for its walls are concave and the capacity is further increased in length by one-half of an inch, owing to incomplete involution on the part of Nature after the first pregnancy. Need we seek for more conclusive evidence than this to support our position? Is it not plain to be seen that the resistance in the primiparous organ will be greater and the nervous disturbance more pronounced than where the cavity is larger, thus allowing the ovum to undergo its development without interference? Further, the period when nausea and vomiting are most apt to occur is in the second month, at a time when the growth of the uterus is principally lateral and the villi of the chorion are thrusting themselves into the serotine or placental decidua. As to the character of its onset, it is usually gradual, and disappears in a similar manner as the uterus rises out of the true pelvic cavity, thus having quite ceased by the end of the fourth month.

Concerning the symtomatology of this affection, it has not a few well-defined characteristics. The primary nausea and oppression experienced over the epigastrium soon gives place to vomiting, not, however, preceded or accompanied by any degree of nervous depression, as is the case with emesis under all other circumstances. The food, if any is present in the stomach, is expelled, not violently nor with any amount of retching, but almost as if it were regurgitated. Should the stomach be empty, then simply a little clear, normal gastric mucus is raised, which, as it usually occurs early in the morning, has given rise to the popular appellation of morning sickness. Further, if the matter vomited be food, it will not be found on examination to be sour or to have undergone decomposition, but in a more or less perfectly digested state, depending upon the length of time since its ingestion. As to the subsequent amount of nervous depression, in most instances it is practically *nil*, even when the vomiting is frequent and of long duration. This fact is very noticeable in some cases; the pregnant female may have just finished a hearty meal—for impairment of the appetite is rather the exception than the rule—when almost immediately afterward she will be obliged to evacuate the stomach, only to turn to the piano and find consolation for her lost breakfast. Rarely does one meet with a case of vomiting of pregnancy where the female's health has materially suffered, and this is what one would reasonably expect from the study of the symptomatology of the affection.

That this digestive disturbance is a purely sympathetic one, is proven by the fact that by a strong effort of the will the female can not infrequently ward off an attack.

Should she, for instance, have accepted an invitation out to dine during this period of gestation, she can control the nervous irritability by a firm determination not to betray her condition to the assembled guests. It has been repeatedly asked, How can a woman suffer from morning sickness at one period of gestation and not at another? In other words, How is it that the attacks vary in severity in different pregnancies? Moreover, Why is it that one pregnant woman has morning sickness and another does not? Can this be explained on the hypothesis of reflex nervous irritability? Most assuredly!

The variability in the duration and severity of the affection is due to two factors: Greater or less irritation, and greater or less irritability. The question may here be asked, Is vomiting of pregnancy a physiological or a pathological process?

It has been stated that among women of a strong, robust type, vomiting of

pregnancy is exceptional rather than the rule, as is the case in Europe and America. But this fact has no direct bearing on the case; it goes without saying, that the stronger and less sensitive the nervous system the less general and severe will be the sympathetic disturbance. One certainly is not warranted in stating that the vomiting of pregnancy is a pathological process, for it is due to a purely physiological cause. There exists no morbid alteration in structure or function of the nerves. The irritability is not pathological but physiological, depending upon the degree of sensibility of the nervous apparatus. Yet it has been claimed by some investigators that this very exaltation is evidence of some pathological lesion. Surely not. It were, it seems to me, as reasonable to declare a person's brain diseased because he is irritated by Wagner's music, in which he finds no harmony, as to declare that the sympathetic disturbance excited by pregnancy is due to some morbid process.

Again, if we select two galvanometers, one registering the weakest electric current, the other equally well constructed, but less sensitive, we cannot say that the former is any more perfect than the latter; they differ simply in the degree of their sensibility. Difference in sensibility within certain prescribed limits is a physiological, not a pathological fact. While vomiting, as Austin Flint points out, is not, strictly speaking, a physiological process, yet under these circumstances it is far from pathological; rather let us say it is the pathological expression of a physiological process. The vomiting of pregnancy, unless complicated by some morbid process, never gives rise to alarming symptoms or threatens life. If prolonged beyond the period of quickening, its continuance may be accepted as positive evidence of some complication, which a decided alteration in the character of the vomited matter will usually indicate.

Cases of pernicious vomiting call for diligent search for organic lesions in the nervous system, or structural changes in some of the generative or associated organs. That the vomiting of pregnancy occurs in healthy, strong women almost as frequently as in their less robust sisters, though in a milder form and of shorter duration, only confirms the view as to its physiological nature. The view advanced, that the difficulties of parturition are proportionate to the severity and length of the morning sickness, one is scarcely prepared to accept. The gravity of the digestive disturbance is to be estimated by the amount of nervous irritability, while the difficulties attending parturition may be classified under two heads: maternal and fœtal. The former including uterine inertia, pelvic deformity and rigidity of the soft parts; the latter abnormal size of the fœtus and malpositions of the fœtus. Surely no such conclusions are justified, for the reports from the large lying-in hospitals of both America and Europe unmistakably prove no such relation exists. Females who have suffered great annoyance from morning sickness have frequently as easy and sometimes more rapid labors than those who have almost wholly escaped this unpleasant early indication of pregnancy. Therefore, in conclusion, it would appear from a study of this affection: First, that the vomiting of pregnancy is due to a reflex irritation produced by the developing ovum acting upon an exalted nervous system. Second, that it is not an affection of great gravity and need occasion no anxiety or alarm. Third, that active treatment is rarely demanded, as it is only a disturbance of a few weeks at the most. Fourth, that the severity of the gastric trouble is no indication of the character of the subsequent labor. Fifth, that where the affection persists beyond the period of quickening, it is due to pathological causes, which must be discovered and treated accordingly. (*For discussion, see Society Reports.*)

CASE OF INVERSION OF A NON-PUERPERAL UTERUS.*

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This case seems to me of interest because of the comparative rarity of the condition. I give it simply as a contribution for clinical discussion.

' Mrs. H., aged forty-three, in November, 1890, complained of having had bearing-down pain for some months, and a slight vaginal discharge which had recently become offensive. Menstruation had been regular, and there was no great loss of blood

* Read before the Philadelphia County Medical Society, December 23, 1891.

at her usual periods. The woman had been married eight years; had had one miscarriage, but no children.

"Vaginal examination revealed a reddish mass protruding from the uterus through a well-dilated os. As this was evidently a submucous fibroid tumor, a drachm of fluid extract of ergot was ordered to be taken three times a day, and douches of corrosive sublimate (1:4000) to be used twice daily. A little later the vaginal douche was changed to carbolic acid solution.

"About ten days after I first saw her the patient was etherized, and a sloughing, friable mass removed with the fingers and forceps, aided by a curette. The mass was about the size of a small orange. The patient recovered promptly and was discharged from treatment in about two weeks' time.

"Three weeks later I was sent for to see the same woman, who was then very emaciated, exceedingly week, and suffering intense pain in the abdomen, with the knees flexed upon the pelvis, and with an exceedingly fetid, profuse, and sanguinolent discharge from the vagina.

"Pressing my hand upon the abdomen, I found the bladder greatly distended with urine, and upon investigation I discovered that she had not passed any water for several days. Catheterization relieved this condition, and examination by the vagina showed the existence of another sloughing fibroid tumor. This was readily removed with the forceps and fingers. The patient recovered promptly, though she was still weak when last seen.

"About three months later she came to my office exceeding pallid, with the statement that for some time she had been suffering from most profuse uterine hæmorrhages. Examination revealed protruding from the vulva a mass about the size of a small apple. Constant loss of blood was taking place, and the patient was so anæmic that she nearly fainted in my office, and had to be sent in a carriage to the Polyclinic Hospital. The vagina was packed, and the patient given full doses of quinine and whiskey. This was in March, 1891. After having been kept in bed for several days she was etherized, and a full examination of the uterine condition made. I found what I had previously suspected—a small growth attached to the fundus of the uterus which had caused inversion of that organ. The mass occupying the vaginal outlet and the vagina was, therefore, the uterus, which had been turned inside out, with the attached polypoid, fibroid tumor. I readily tore loose from the mucous membrane of the inverted uterus what was found to be two small fibroid tumors, one about the size of a black walnut, and the other rather smaller. They are shown on the plate containing the specimens, but are now shrunken from long immersion in alcohol.

"An effort was then made to replace the inverted uterus by continuous pressure made with the finger introduced into the vagina. This was continued for a long time, but proved ineffectual. I considered at the time the propriety of removing the inverted uterus by performing partial or complete vaginal hysterectomy. It seemed to me, however, that it would be wise to make a further attempt at replacement before adopting radical measures. The patient was accordingly kept in bed nearly two weeks in order to build up her general health by stimulus and tonics, before making further attempts at invaginating the inverted uterine walls.

"She was then again etherized, and a prolonged effort was made at replacement by means of the fingers and Aveling's repositor. The manipulation was kept up for an hour and a half, but was absolutely useless, although the pressure was made in a very continuous manner. The patient became so weak that I feared she might die upon the table, and I therefore abstained from further manipulation and again put her back to bed.

"Two weeks later another effort was made to overcome the inversion of the womb. I was assisted on this occasion by Drs. Baldy, Baer and Anna M. Fullerton, whose counsel and aid I felt that I greatly needed. The abdomen was opened by a median incision, when the coils of intestine occupying the pelvis were seen united by recent lymph, evidently due to the traumatism of the previous manipulations. An endeavor was made to correct the condition of the uterus by means of strong forceps introduced through the abdomen to dilate the uterine neck, while pressure from below was made with the fingers in the vagina. Although these manipulations were performed by such skillful operators as those I have mentioned, we were unable to make any marked impression upon the displaced organ. Unfortunately, I had not provided myself with the most approved form of forceps. I then pushed through the fundus of the uterus a large needle carrying a strong piece of fishing-line to which was attached at the vaginal end a button of soft metal. I hoped that traction on this cord through the abdominal wound would, by means of the button pressing upon the mucous membrane of the uterus in the vagina, cause the uterus to assume its proper condition. While dilatation of the inverted fundus was made by means of the forceps, traction was made upon the string and pressure upward through the vagina. The muscular contraction of the uterine neck, however, prevented anything being gained by this manipulation, although the force applied was such as to finally cause the button to pull through the fundus of the uterus and to make its exit into the pelvis. After spending considerable time in these unsuccessful attempts, I finally did a partial vaginal hysterectomy, removing the inverted portion high up and stitching the edges of the uterine wall at the fundus together. This procedure was resorted to only after the patient had been under ether for three hours and was so overcome by shock that her condition was extreme. She did not react, her temperature not rising above 95° F., and she died within a few hours.

"The abdominal wound was then opened, and a very small amount of blood found near the stump of the uterus. Evidences of non-septic traumatic peritonitis due to the previous manipulation were present, as has been stated in the account of the last operation."

In looking back upon this case, I cannot but feel a sense of regret that the more radical operation of vaginal hysterectomy was not done at the time that the patient was subjected to operation for removal of the tumors causing the inversion. My desire to avoid an operation accompanied by shock and hæmorrhage at the time she had been so depressed by violent and repeated flooding, made me adopt what at the time seemed a less radi-

cal course. The extreme difficulty of dilating the uterine neck in cases of inversion was not appreciated by me until I found my attemps at replacement futile. (*For discussion, see Society Reports.*)

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 9 and 23, 1891.

THE PRESIDENT, JOHN B. ROBERTS, M. D., IN THE CHAIR.

Dr. T. B. Schneideman read a paper on "Ophthalmia Neonatorum as a Cause of Blindness." (See p. 129.)

DISCUSSION.

DR. GEORGE E. DE SCHWEINITZ: Unfortunately, I came into the room too late to hear the first portion of this paper. There is no question that bichloride of mercury, under ordinary circumstances, is an excellent germicide, but in spite of the good results which have been reported, I am very much against the use of strong solutions of this drug in ophthalmia neonatorum. It is true that investigations have shown that a solution of 1 : 10,000 will retard the vitality of certain bacteria—for example, staphylococcus pyogenes aureus; but in ophthalmia neonatorum and in gonorrhœal ophthalmia, the characteristic behavior of the gonococci is their residence within the living cells, and under these circumstances I do not believe it is possible for irrigations of bichloride of mercury to act in their ordinary germicidal function. Moreover, I am convinced from clinical and direct histological experience that strong solutions of sublimate have a distinctly deleterious effect. I need not refer at any length to the disastrous results to the cornea that have occurred from the use of this drug in strong solutions during cataract operations. Especially is this true when they have been employed to irrigate the anterior chamber. It is of the highest importance during ophthalmia neonatorum that the epithelial surface of the cornea shall be kept intact; and while I am not prepared to say that the use of a strong solution can actually produce an abrasion, I am well satisfied that it adds distinctly to the dangers of the case. A recent European investigation in regard to the effect of this drug upon the cornea has demonstrated its capacity for producing changes that might well make one hesitate in its employment in very active strength. It should be remembered that during the height of an attack of ophthalmia neonatorum, the resisting power of the cornea is materially decreased, and hence very irritating solutions, no matter of what composition, are to be deprecated. I beg to be understood in this matter; I do not for one moment dispute the value of bichloride in purulent affections of the conjunctiva, but I deem it inadvisable to use the drug in strong solution, and believe that it is impossible to employ it *safely* in such strength that it will act as a *true germicide*. Moreover, it has been shown that bacteria in the presence of albumen have the power to reduce bichloride of mercury to calomel. Now, calomel, to a certain extent, is a germicide, but must have very inferior qualities under these circumstances. There does not seem to be any objection, for cleansing and antiseptic purposes, to a strength of 1 : 10,000 (Cohn, in his recent book, recommends (1 : 5000). A convenient strength is a grain to the pint—*i. e.*, about 1 : 7500. In the Philadelphia Hospital, as my colleague, Dr. McKelway, will testify, we are in the habit of using alternately a solution of bichloride of mercury, a grain to a pint, and a saturated solution of boric acid. If the cleansings are made hourly, first one and then the other drug is employed. Boric acid is without germicidal value, but it is an excellent slightly astringent cleansing agent.

Referring to the other portions of the treatment advocated by the Doctor in his paper, I beg to agree with him most emphatically—*i. e.*, with his use of nitrate of silver. It should not be employed in the earlier stages, or in any stage in which there is much infiltration and the formation of false membrane; but when there is free secretion of yellow pus, when the lids are supple, when the conjunctiva is covered with hypertrophied papillæ and positive granulations, nitrate of silver, in the strength of ten to fifteen grains to the ounce, is the germicide *par excellence*. Applied carefully with a cotton mop, and properly neutralized, if strong solutions are employed, any irritating effect upon the cornea may be avoided. It acts in three ways: as a germicide, because it is at the same time a superficial caustic, destroying a layer of epithelial cells, and probably the bacteria which are contained within them; as an astringent; and as an alterative, using that term to imply its efficiency to alter the nutrition of a mucous membrane which is inflamed.

In regard to the other solutions which various surgeons have employed in this condition—carbolic acid, aqua chlorini, weak solutions of nitrate of silver, etc.—my experience is limited. They come to us endorsed with high authority. In regard to one drug, however, I wish to place myself on record—namely, pyoktanin. I hope that no one will treat cases of purulent ophthalmia in the newly-born with this drug.

Finally, I may say that, in my belief, the more or less continuous application of cold is of great value in the earlier stages. The essayist has referred to atropine and eserine, evidently giving his preference to the former drug, should corneal ulceration indicate its use. I would reverse the order and place eserine first, provided no iritic complication contra-indicates its instillation.

DR. CHARLES H. THOMAS: There is one suggestion growing out of what Dr. Schneideman has said which seems worthy of further amplification—that is, the question of some legal enactment which shall help to prevent the blindness which is so frequently the result of ophthalmia neonatorum. Such a law has been enacted by the State of New York, and there has been some attempt to establish one in the State of Pennsylvania. It seems to me that there is no place in the State of Pennsylvania where a movement with this object in view could be more effectively inaugurated than in this society. It is my hope that all who have heard this very able and true statement, will resolve themselves into a committee to further the enactment of such a law as has been suggested. There is no question as to the propriety of compelling midwives to report such cases, and I am not sure but that we

could go further with propriety and require medical practitioners to report these as well as other cases of infectious diseases. There are, of course, many physicians who should not be put to this trouble, but there are others who see but few such cases, and it would have a wholesome moral effect upon all to feel that this disease was dignified enough to require a report to the Board of Health.

Dr. Charles P. Noble: I will speak upon this subject from the standpoint of the obstetrician rather than from that of the ophthalmologist. There are several points which interest me. I am much pleased to find that so long ago as 1807, some one had insisted upon the fact that the treatment of *ophthalmia neonatorum* should begin with the mother. This has been insisted upon by various obstetricians, and I have myself long felt the importance of it. It has been a rule with me for years to pay attention to the question of vaginal discharges in pregnant women. If there is a free vaginal discharge, even though no complaint is made of its irritation, I have always made a local examination, and if vaginitis were found to be present, have insisted upon systematic local treatment. I think that this is a most important point, and one that is even more important than the early treatment of the eye. If we can prevent infection, we do not need the early treatment of the ophthalmia. Some years ago, when connected with the Lying-in Charity, I saw quite a number of cases, and I have had several in private practice. I may say that among these cases there was only one in which an eye was lost. This occurred in a syphilitic infant. In this case, Dr. Lautenbach acted as a consultant, so that the child had everything that ophthalmological science could do for it. The treatment used at the Lying-in Charity was frequent irrigation with a saturated boric acid solution. When the discharge was very free, it was used as often as every half hour, together with silver nitrate solution (ten grains), used twice daily. It was thought that advantage was derived, particularly when the swelling was great, from the application of cold compresses.

Speaking still from the standpoint of the obstetrician, I should advise that the practitioner always avail himself of the counsel of an oculist in the management of such cases. He will thus be saved the anxiety and regret of occasionally losing an eye and forever injuring the prospects of the infant.

On motion, the following committee was appointed to confer with the State Board of Health relative to this subject: Drs. T. B. Schneideman, C. H. Thomas, Benjamin Lee, Edward Jackson, G. E. de Schweinitz.

Dr. T. Ridgway Barker read a paper on "Some Mooted Points Concerning the Vomiting of Pregnancy." (See page 133.)

DISCUSSION.

Dr. Charles P. Noble: Dr. Barker prefaced his remarks by saying that he should not take up the matter from a theoretical standpoint, and that he would not present the theories held by others, but would study it from the standpoint of anatomy. I think, however, that the theory he advances, that the vomiting of pregnancy is reflex in its origin, due to the growth of the ovum, is a very old one. The are a great many theories to account for this affection. Among the most important is that held by Grailly Hewitt—namely, that the vomiting is due to induration or inflammation of the cervix or to flexion. Dr. Hewitt has gone very fully into the subject, and while we may not agree that this is the only cause of vomiting of pregnancy, yet anyone who has studied the large number of cases which he reports, cannot help but feel that there is a close relationship between exaggerated flexion of the uterus and also induration of the cervix due to inflammatory trouble and the vomiting of pregnancy. I have myself not infrequently seen this combination. I have also seen vomiting associated with more or less endometritis, and with induration and thickening of the cervix which was present before pregnancy took place. Again, the uterus may be more or less fixed by old inflammatory trouble, and when it becomes pregnant it is prevented from rising into the belly, as is usually the case, and in that way also the reflexes are increased. Again, we know that the uterus may be retroverted and caught under the promontory of the sacrum, and may then be prevented from rising into the abdomen, and may produce such reflex symptoms. I am satisfied that old inflammatory trouble in the pelvis has a great deal to do with the vomiting of pregnancy. It, however, simply acts to increase the reflexes from the uterus.

A more recent theory, and one supported by so eminent an authority as Kaltenbach, is that the vomiting of pregnancy is hysterical. I think that there is no doubt that a certain number of cases are due to hysteria. But I would not go so far as to hold that all cases are due to this cause.

There is no question that not only do we have as a result of pregnancy changes in the pelvis, but the whole body of the woman increases in size and undergoes changes. The entire vascular system becomes hypertrophied, and the heart also becomes enlarged. We know that pregnancy changes the entire form of the woman. The entire system is involved, and we can readily understand that congestion of the alimentary canal can be brought about. We all know that the nervous system in the pregnant woman is extremely irritable. It resembles the nervous system in children. For this reason, irritation from the pelvis which ordinarily would not be sufficient to cause reflex symptoms, can do so at this period.

The Doctor assumes that the reason why primiparous women are more apt to have vomiting than multiparæ, is because the uterus of the multiparous woman is larger, and therefore the growth of the ovum would not cause so much distention. There is no question concerning the fact, but the explanation is not satisfactory.

It is true that the uterus of the multipara is larger than that of the primapara. It is also true that the abdominal walls are more relaxed, giving a less degree of intra-abdominal and intra-pelvic pressure. The woman is better prepared for pregnancy, having already been pregnant. The mental condition is probably not so disturbed, and the emotions not so excited in the multipara. All these points must be considered. Moreover, it must not be forgotten that the uterus grows as well as the ovum, so that it is at least questionable whether the ovum distends the uterus. Does it not simply fill it?

It seems to me that the practical outcome of the whole matter is that, given a serious case of vomiting in pregnancy, it is the business of the practitioner to find the cause of the trouble.

Whether it is extrinsic purely—due to indigestion or uræmia; or whether due to excitability of nervous system or to hysteria; or whether some pelvic lesion is the source of irritation. If this plan of treatment were followed, better results would be obtained.

Dr. John B. Roberts reported a "Case of Inversion of a Non-Puerperal Uterus." (See p. 135.)

DISCUSSION.

Dr. Charles P. Noble: It has been my experience to see two cases of inversion of the uterus, and in both cases the attempts at reduction failed. The first case I saw at the Lying in Charity, and was, I think, a long-standing post-puerperal case. Manual reduction was tried, but abandoned for the reason that the uterus was soft and macerated. In this case the uterus was amputated and recovery occurred. The second case I saw with Dr. Kelly and was present at an operation in which he opened the abdomen. The abdominal neck of the inversion was dilated with forceps, and manipulations were made with one hand in the belly and one in the vagina, but the effort at reduction failed. In that case, Dr. Kelly took out the whole uterus, and the patient made a good recovery.

Speaking of the treatment, Dr. Roberts did not mention one method which has met with excellent results. It is the method of gradual reduction advised by Dr. Aveling. Constant pressure on the inverted uterus is made through a repositor, which is attached by elastic bands to a support about the waist. A large series of cases has been reported in which this method has been employed with almost universally successful results. Of course, in some cases the presence of adhesions will prevent the reposition of the uterus. The reasons for the success of this plan is plain. The problem is to overcome the resistance of the muscular tissue in the upper part of the cervix, and to make it relax and dilate. This tissue is resistant enough to tire out the muscles of the surgeon when attempting rapid reduction, but gives way before the steady action of the rubber tapes. It seems to me that in a case of any standing, attempts at rapid reduction are inadvisable, and are liable not only to fail but to do harm. It seems to me that in a long-standing case of inversion, the thing to do would be to pack the vagina with an astringent tampon, and afterward apply the gradual method of Aveling. If that did not affect reduction, the best thing would be to do a radical operation. The question arises whether it would not be better to remove the ovaries and tubes, which would bring about a cessation of the hæmorrhage. This would be a simple matter, and I think that reduction in the size of the uterus would take place. If this were not done, I think that a simple amputation of the protruding mass would be quite a feasible operation; but, of course, the danger there would be that after the mass of the uterus was removed the remainder would reinvert itself, and possibly infect the peritoneal cavity. This could be obviated by using transfixion pins. My own feeling would be in favor of removal of the tubes and ovaries, and later to do a vaginal hysterectomy, if necessary.

Dr. Roberts: In this case the uterus was not soft, but was as hard as a fibroid tumor. The tightness with which the neck grasped the inverted uteurs was something astonishing.

I am somewhat familiar with two other cases of inversion of the uterus. One happened some years ago in the country. The practitioner did not know what was protruding after labor, and sent for Dr. Levis, who, after a good deal of manipulation, pushed the inverted uterus back. The second was also, I think, a puerperal case, and happened not long ago at the Woman's Hospital of Philadelphia; in this instance, the physician was able, after manipulation for several hours, to replace the uterus. It was perhaps the knowledge of these cases which led me to make such prolonged attempts at reduction. I see now that it was unwise, and I agree with Dr. Noble that if such a case again came under my care, I should be inclined to first remove the ovaries, and if that were not sufficient, to make a total hysterectomy. This patient was *in extremis* at the time, and I did not feel justified in doing a too radical operation when I removed the two small tumors.

SELECTED FORMULÆ.

INTESTINAL ANTISEPSIS.

The following formula is recommended by Dujardin-Beaumetz as a good intestinal antiseptic:

℞ Salol,
Salicylate of bismuth,
Bicarbonate of sodium, āā 150 grains.
M. and divide into xxx powders in capsules. S. One before breakfast and one before dinner.

—*Les Nouveaux Rémèdes*, November 8, 1891.

RESORCINE IN DIARRHŒA.

Menckle (*Centralbl. für klin. Med.*) who has, with gratifying success, employed resorcine in the treatment of diarrhœa in children and adults, highly recommends the following:

℞ Pure resorcine.....gramme 1.
Distilled water.....grammes 90.
Simple syrup..... " 60.
Camphorated tinc. of opium....gramme 1.
M. S. A dessertspoonful every two hours.

For children b th the resorcine and the paregoric should be reduced to 0.50 grammes, and then the potion can be given in teasp onful doses every two hours.

—*Le Bulletin Médical*, November 11, 1891.

TUBERCULOSIS.

Arthaud proposes the following mixtures in the treatment of tuberculosis, especially in the second stage of the disease:

a. ℞ Iodide of potassium.....grammes 10.
Alcoholate of tannin..... " 20.
Glycerine..... " 150.
Alcohol..... " 50.
Banyuls wine.....q. s. for 1 litre.
M. S. A glassful after each meal.

b. ℞ Fluid extract of rhatany (50 per cent).....grammes 30.
Syrup of mulberries..... " 250.
M. S. A tablespoonful 5 times a day, to be accompanied by the administration, night and morning, of 10 drops of tincture of iodine in milk.

—*Le Progrès Médical*, December 5, 1891.

FUCHSINE IN CHRONIC ULCERS.

After washing of the ulcers with warm water, they should be touched with the following solution, as recommended by Rosenberg :

℞ Distilled water.....grammes 200.00.
Alcohol (90 per cent.)..... " 10 00.
Fuchsine..... " 0.70.

The ulcers are to be covered with gauze moistened in the same solution. The drug is said to diminish pain and suppuration, and to cause a rapid cicatrization.

—*Le Bulletin Médical*, November 11, 1891.

FOR FISSURES OF THE TONGUE.

The following solution is applied, by means of a pencil, in the treatment of fissures of the tongue :

℞ Phenic acid.....grammes 2.50.
Tincture of iodine,
Glycerine..... āā " 12.50.

—*Allgemeine med. centr. Zeitung ; Le Bulletin Médical*, Nov. 11, 1891.

LARYNGEAL AFFECTIONS.

Schnitzler recommends the following mixture to be blown into the cavity of the nose and of the naso-pharynx, as well as into the larynx, in diseases of those parts :

a. ℞ Subnitrate of bismuth.....grammes 10.
Sugar of milk..... " 10.
Balsam of Peru ..... " 2.
M.

The same author extols the following solution as a local application :

b. ℞ Chlorhydrate of cocaine.....grammes 0.50.
Balsam of Peru..... " 10 00.
Alcohol..... " 10.00.
Aromatic essence.....drops 5.

Schnitzler prefers the balsam of Peru to phenic acid, creasote or creoline, on account of its agreeable taste.

—*Revista de Ciencias Médicas de Barcelona*, December 10, 1891.

TOPICAL APPLICATIONS IN DIPHTHERIA.

Dr. George W. Peck writes in *The Medical News* that he has found the following to be an efficient application in the treatment of diphtheria. It can be employed in all stages of the disease, without danger to the patient. It should be applied often and thoroughly, by means of a brush or cotton swab, until the diseased membrane entirely disappears. In connection with this remedy he gives as much brandy as the patient will bear, and such other remedies as may be indicated :

℞ Acidi borici..... 3j.
Acidi lactici .....f 3j.
Glycerini.....f 3jss
Aquæ dest.....f 3ijss
Liq ferri subsulph.....f 3jss.
M. This solution may be used in full strength or diluted with water, as each case may require.

SULPHUR IN DISEASES OF THE SKIN.

Zadeck, of Kiew, who has made an especial study of the therapeutic uses of sulphur in cutaneous affections, recommends the following preparations :

For inveterate cases of *acne rosacea* and *seborrhœic eczema :*

a. ℞ Flowers of sulphur.....grammes 2.50.
Ointment of benzoate of zinc (or vaseline)..... " 30.00.
M. S External use.

b. ℞ Flowers of sulphur,
Spirit of camphor,
Glycerine,
Rose-water.....āā grammes 10.
M. S. To be applied over diseased parts, on retiring.

This is especially recommended in *acne rosacea* of the nose, and also of the face.

For *seborrhœa of the scalp :*

℞ Flowers of sulphur.....grammes 200.
Oil of sweet almonds..... " 90.
Glycerine..... " 90.
M. S. Externally applied ; to be shaken before using

For *hyperhydrosis* of the hands, axilla, feet and other parts :

a. ℞ Flowers of sulphur.....grammes 2.00.
Powder of arrow-root..... " 15 00.
Salicylic acid..... " 0.50.
M. S. To be powdered over affected parts.

b. ℞ Flowers of sulphur.....grammes 8
Sulphuric æther..... " 10.
Rectified alcohol..... " 60
M. S. To be applied over diseased parts.

—*Le Bulletin Médical*, December 16, 1891.

SYPHILITIC OTITIS.

Laurence Turnbull recommends the following prescriptions in the constitutional treatment of syphilitic diseases of the ear :

a. ℞ Red iodide of mercury.....15½ grains.
Iodide of potassium.....13 drachms.
Distilled water.....2 fluid ounces.
M. Dissolve and filter, then add simple syrup until the whole measures 50 fluid ounces S. One teaspoonful 3 times a day.

b. ℞ Bichloride of mercury..... ⅛ of a grain.
Arsenious acid..... ¼ "
Pyrophosphate of Iron .....6 grains.
M. and make xxiv pills. S. One pill 3 times a day.

—*Annals of Ophthalmology and Otology*, January, 1892.

TREATMENT OF SCABIES.

Prof. Kaposi, of Vienna (*Wiener med. Wochenschr. ; Gaceta médica catalana*, No. 7, 1891), recommends the following salve as most efficacious in the treatment of scabies :

℞ Adipis.....grammes 100.
Saponis..... " 50.
Naphthol, *B*..... " 15.
Cretæ pulverizat..... " 10.

The treatment should not necessarily extend over twenty-four hours. If there be pruritus present the amount of naphthol must be reduced ; and if eczema, still less must be used, as the naphthol determines an active irritation.

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LEADING ARTICLE.

THE ACTION OF ERGOT AS A HÆMOSTATIC IN UTERINE HÆMORRHAGE.

Whatever may be our knowledge at present of the physiological action and therapeutic value of ergot, it is certain that many essential points regarding this interesting drug remained to be clearly explained experimentally and clinically. Opinion appears to be equally divided on the question of the action of ergot upon the circulation, for in looking over the literature of the subject we come across a mass of evidence replete with contradictory statements.

Thus, for instance, in regard to the effect produced by ergotine on the arterial pressure: First, the researches of Vogt, Holmes, Kohler, Eberts and H. C. Wood, which seem to show a decided increase; second, the results obtained by Herzmann, Borescha, Madelin and Wernich, showing a lowering of pressure; third, the investigations of Markwald, indicating that the blood pressure is neither increased nor diminished.

It is well known that ergot or its essential alkaloid exercises in hæmorrhage a decided action; that is, under its influence the flow is checked. How this phenomenon is brought about has not been definitely established. Leaving aside, for the time being, a centric vaso-motor influence (an influence which, according to most authorities, is not exercised by the drug), and referring especially to the effects produced by the remedy on uterine hæmorrhage, it is apparent that the drug exerts an action on the uterine vessels and nerve structures. This appears to be sustained by the recent experiments of Ellinger. In normal conditions, it has been found that asphyxia causes peristaltic contractions of the uterus, that they are even observed in curarized animals, and that they are prevented by previous section of the spinal cord. Asphyxia under these latter circumstances is powerless to excite the organ into activity. On the contrary,

ergot, which, under ordinary circumstances, is able to act upon the uterus as an oxytocic, retains the same power after previous division of the medulla spinalis —an indication that the action of the drug is a peripheral one. Ergot acts, therefore, directly upon the spinal cord or uterus; that it is upon the latter seems evident in the fact that it produces contractions in the excised organ. This admitted, the drug, to diminish hæmorrhage, must directly influence the uterine muscular fibre itself or else produce constriction of the arterioles. Neither view, however, is accepted by Ellinger, and following the opinion of Markwald, referred to already, to the effect that under the influence of the drug the blood pressure remains intact, he regards the hæmostatic action of ergot under a new and certainly untenable light. He believes that the remedy acts upon the blood itself, rendering it coagulable at more or less susceptible points of the vascular system.

The most recent and a very valuable contribution to the study of the actions of ergot is that of Hemmeter, published within a few months. The experimental investigation was carefully carried out by the author, and from the results obtained he finds, among other facts, that ergot increases the blood pressure, diminishing at the same time the number of cardiac pulsations. The increase was generally preceded by a primary fall of pressure, the unusual rise occurring not only in normal animals but also in those in which the heart was previously isolated from all nervous connection by section of the pneumogastrics and spinal cord. These results appear to corroborate those observed by Holmes, Eberts, Wood and others, and it is evident that the rise of arterial pressure is dependent upon an action of the drug on the heart or on the arterioles. From a purely physiological point of view, if the arterioles are made to contract, the blood pressure rises, but, at the same time, the increased pressure stimulates the vagi centres in the medulla oblongata, in consequence of which the pulse-rate falls, and thus we have the curves of the pressure and the pulse running in opposite directions. When this takes place it is assumed by physiologists that the change in the pressure is due to the arterioles. This is precisely what occurs under the influence of ergot, according to Hemmeter, and he, therefore, concludes that the drug produces an increase of the arterial pressure by an action upon the arterioles and not upon the heart.

Practically we know from clinical experience that ergot is not only an excellent oxytocic, but a most valuable hæmostatic; that it does good in almost all kinds of hæmorrhages. But the question at issue, whether this influence is due to an action of the drug on the arterioles, as is generally held, or whether it is due to an alteration on the blood itself, as is believed especially by Ellinger, remains unsettled, although it seems clear that the view of Ellinger is incorrect.

THE VISITING NURSE SOCIETY OF PHILADELPHIA.

There is a little society in Philadelphia which is accomplishing, in a quiet way, a most important and noble piece of work, and which deserves not only the hearty support of the charitably disposed, but emulation in every city and town in the country.

The chief objects of the society, as stated in the little pamphlet recently issued, are: First, to give a good nurse for a short visit to persons of means who can afford to fully pay for this care, but do not require the entire time of a trained nurse; second, to send an "Outside" nurse to a family in moderate circumstances where the service can be paid, but where there is no one to attend the sick person; third, to provide fully trained nurses for the sick poor, that by skilled care recovery may be hastened, and contagion and other evil consequences avoided.

It is the desire of the society to work under the orders of physicians among such patients as are neither suitable cases for hospitals nor able to obtain proper care at home. The nurse will visit each case once or twice a day, as may be required, and in extreme necessity will remain all day when possible. A moderate charge is made for each visit. As the nurses make visits daily, it is impossible for them to undertake contagious diseases.

Special nurses are provided for obstetric cases.

The society hopes for the co-operation of physicians both to help the destitute and those in narrow circumstances, and to establish among them a higher standard of hygiene.

As an evidence of the good work accomplished, we find by the report of the society that during the five years of its existence there were attended 2818 cases, and 35,703 visits made.

Nurses are furnished under the following terms:—

1. A *visiting* nurse is furnished without charge to those unable to pay for her service.

2. From those able to give the car fare, it is expected, being ten cents a visit.

3. For those in comfortable circumstances a visiting nurse can be furnished, but the charge must, in such cases, fully cover the expense to the society, fifty cents or one dollar a visit, according to the time required.

4. The "Outside Nurses" mentioned in this report must be paid by the patient according to agreement, as the society has no connection with them except keeping their names on file.

5. Visiting nurses will remain with a patient for the first twenty-four hours after a major surgical operation, and will visit after that daily as required. Should a patient need continuous care, an outside nurse must be engaged and paid for by the patient.

6. The hours of the nurses are from eight o'clock in the morning until eight at night. After that time they cannot respond to calls.

7. The nurses will visit in the morning those cases which have been reported the previous day, while those coming to the office before twelve o'clock will receive attention that afternoon.

8. The nurses are for the use of the public, and it is desired that physicians and others interested in the sick shall send for them. The service should be paid for whenever possible, as the society is supported entirely by charity.

We hope that the evident need of such a society in every large community, and the splendid work that has already thus been accomplished in this city, will be the means of stimulating others to follow in its footsteps. It is only when we or those near and dear to us are very ill, and need skillful attention, that we fully appreciate the invaluable offices of the Trained Nurse—the greatest luxury in medical practice of the century.

BOOK REVIEWS.

AGE OF THE DOMESTIC ANIMALS: BEING A COMPLETE TREATISE ON THE HORSE, OX, SHEEP, HOG AND DOG, AND ON THE VARIOUS MEANS OF DETERMINING THE AGE OF THESE ANIMALS. By RUSH SHIPPEN HUIDEKOPER, M. D., Veterinarian (Alfort, France); Professor of Sanitary Medicine and Veterinary Jurisprudence, American Veterinary College, New York, etc. Illustrated with 200 engravings, 8vo, 225 pp. F. A. Davis, publisher (Philadelphia and London), 1891. Price, $1.75.

The appearance of this work is an incident of importance to veterinarians, and horse and cattle owners and dealers. It is the first existing treatise upon the subject in the English language.

The author, in the preparation of the book, states that he has "attempted to prepare such a book as he feels would have been of interest and service to himself in his association with animals as a layman, and would have aided his studies and appreciation of the anatomy of the teeth, dentition, and means of determining the age. He hopes, also, that this work will furnish to students and veterinarians, knowledge which will aid in surgical operations on the mouth."

He has drawn freely from the French, German and English sources, both in text and illustration. The book is well planned, clearly written and printed, and is an excellent exposition of the subject.

A, B, C OF THE SWEDISH SYSTEM OF EDUCATIONAL GYMNASTICS. A PRACTICAL HAND-BOOK FOR SCHOOL TEACHERS AND THE HOME. By HARTVIG NISSEN, Instructor of Physical Training in the Public Schools of Boston, Mass., etc. With 77 illustrations. 12mo, 107 pp. F. A. Davis, publisher (Philadelphia and London), 1891. Price, 75 cents.

In the teaching of Swedish gymnastics the author has found that the treatises on the subject for the most part are not sufficiently practical to be of use as a guide to inexperienced teachers. In the preparation of this little book he has avoided the use of technical terms, and has endeavored to furnish plain answers to the most frequent questions, besides giving directions and illustrative wood-cuts for exercises for children of different ages. The first two chapters contain questions and answers such as have been most frequently put to the author in his nearly fourteen years' experience as a teacher of gymnastics, and these two chapters will give a very satisfactory idea of the foundation of the "Swedish System of Gymnastics." Other chapters contain what are termed prescriptions for daily lessons arranged somewhat as follows:

Five daily orders of exercises for second and third class of Primary Schools. Six daily orders for the first class of the Primary Schools. Seven daily orders for the fifth and sixth class of the Grammar Schools. Nine daily orders for the third and fourth class and fifteen for the first and second class of the Grammar Schools. The book seems admirably to fulfill the purposes for which it was written.

TREATMENT OF BILIARY LITHIASIS.

Dr. Dujardin-Beaumetz (*La Sémaine médicale*, No. 51, 1891), employs as cholagogues:

1. ℞ Euonymin } ..... āā grammes 2 (grs. xxx)
Saponis medicinal }
Sufficient for twenty pills. Take one pill morning and evening.

2. ℞ Sodii salicylic.....grammes 15.
Aquæ..... " 250.
A dessertspoonful after each meal.

For the gall-stone colic one may try large doses of olive oil (200 grammes, —fl. ℥ vij—at a time). If this fail, then he advises hypodermic injections of atropine and morphine, according to the following formula:

℞ Morphiæ sulphat.....cgm. 10.
Atropiæ sulphat..... " 1.
Aquæ sterilizat.....grammes 20.
Inject a (Pravaz) syringeful of this solution.

PERISCOPE.

THERAPEUTICS.

COCA AS A PROPHYLACTIC AGAINST INFLUENZA.

Dr. Sajous writes in the *Satellite*: The nature of influenza, the marked debility induced by it, and its sequelæ, all point to a remarkable depression of the general system. During its presence in the country, the prevalence and severity of other acute diseases were largely increased and the mortality from all other causes augmented. This condition of affairs continued for some time after the subsidence of the epidemic.

The value of coca as a tonic to antagonize any tendency to adynamia is too well known to require elaboration here. Its therapeutical effects tend to build up precisely what influenza tends to destroy —a fact instanced by the use made of coca leaves by the natives of Bolivia and Peru, which renders them capable of undergoing the greatest possible physical strain, and that frequently with sparse nourishment. This remarkable tonic action of coca in medical therapeutics has further been tested by Brown-Sequard, Dujardin-Beaumetz, Bell, Bouchut, A. McLane Hamilton, A. E. McDonald, H. M. Lyman, I. N. Danforth, P. S. Conner, and many other eminent physicians, too numerous to mention in the space at our disposal.

TREATMENT OF ANGINA PECTORIS BY COCAINE.

In a paper in the *Revue de Médicine*, the author strongly recommends the use of cocaine in angina pectoris, in the dose of ½ to ⅓ of a grain three or four times daily. He quotes four cases of this disease which were benefited greatly by this treatment. If the attacks do not cease immediately after taking the remedy, they completely yield to it, however, in about three days. Under its use the pulse becomes slower but fuller, and the quantity of the urine is augmented. The author refers to some observations previously made by him, which appeared to show that the inhalation of oxygen in this disease did much good; he therefore suggests that it should be tried in conjunction with the internal administration of cocaine.—*Med. Chronicle.*

A NEW REMEDY FOR PHTHISIS.

Hardly a week passes without some fresh drug being proposed as an infallible cure for phthisis. This time the remedy is monochlorophenol, recently prepared by Signor Tacchini, a chemist of Pavia, and tried by Dr. Passerini, of Casate-Nuovo. The drug is a powerful antiseptic, free from the disagreeable odor and from the caustic and irritant action of the related compound, trichlorophenol. It is recommended as an inhalation in various affections of the respiratory passages, and particularly in pulmonary tuberculosis. Monochlorophenol is very volatile, giving off vapors much heavier than air, which are, it is supposed, able by their weight to penetrate even into the alveoli when inhaled. The drug is, according to Dr. Passerini, always well borne even in cases of advanced phthisis. Under its influence the sputa diminish in quantity and lose their purulent character; the bacilli become less numerous, sleep and appetite are restored, and body weight increases. A complete cure is reported in five cases after one or two months' use of the drug, symptoms being undiscoverable even five months after leaving off all treatment. We think we remember the same claim being made for other drugs, all of which have, however, after a brief reputation, fallen into the limbo of neglect.—*Brit. Med. Jour.*

THE TECHNIQUE OF MASSAGE.

The forms of disease to which Zabludowski directs attention with reference to the use of massage, are :

1. Traumatic neurosis, with scars from the original injury, productive of nerve disturbances, that is to say, cases in which an individual changed by disease, reacts in an abnormal fashion to the bodily ailment.

2. Affections of the peripheral nerves; (neuritis and perineuritis) especially of traumatic origin.

3. Nervous dyspepsia with constipation, increased formation of gas and tenderness of the abdomen, caused by displacement and pressure upon the intestines, with or without a floating kidney.

In cases of traumatic neuroses in which the simple touching the scar produces a severe pain. Z. recommends leaving the injured spot entirely alone at first.

One should begin the mechanical manipulation as far as possible from the scar and should work gradually from the centre toward the periphery. At each treatment gradually approach the neurotic field, and thus, in three or four treatments it will be possible to directly seize the scar without producing any irritation, which tends to the development of cramp or similar effect. In cases in which massage works very promptly, the result is to be explained by psychical influence. In diseases of the peripheral nerves (neuritis and perineuritis, paralyses of single nerves and muscles) which occur especially in the extremities, it is desirable to effect the reserptive processes, and to establish a "dynamic effect." Z. recommends here a method which enables us to influence the deeper structures without much irritation. This is intermittent pressure which is exercised by the hand of the masseur making centripetal rolling motions.

In conclusion Z. describes a method which he applies for constipation due to atony of the bowel, whether it be with general nervous phenomena, or with severe pain and distention of the abdomen, high fever and giddiness. Inasmuch as we have to do with a local mechanical obstruction to the movement of the intestinal contents, a mechanical treatment is naturally the one which first attracts attention. Z. conducts massage according to a method of his own, which requires the knee-elbow position.—*Review in Schmidt's Jahrbücher, p. 30.*

TREATMENT OF RINGWORM.

Kerley (*N. Y. Med. Journ.*, October 10th) advocates the following methods of treatment : Two grains of bichloride of mercury dissolved in a small quantity of alcohol are added to one ounce of equal parts of kerosene and olive oil. This should be thoroughly rubbed into the diseased areas, and the whole scalp thoroughly saturated once a day, until a smart inflammation is produced ; the part should then be covered with a simple ointment until the inflammation has subsided, when the treatment may be resumed, but the applications may be made less frequent and in a less vigorous manner. A variation in the treatment, which he sometimes found useful, was to rub into the diseased areas on alternate days with the above a saturated solution of iodine in absolute alcohol. In all cases the scalp should be frequently washed with soap and water. Slight inflamma-

tion of the scalp was induced in most of the cases, and in a considerable number a moderately severe squamous condition of the scalp followed on the cure. This was remedied by the application of a 3-per-cent. solution of resorcine frequently. This treatment effects a cure in from six to nine weeks.

KNEIPP'S WATER CURE.

Dr. A. Schleichner (*Zeitschrift für Therapie*) describes the system of hydrotherapeutics practiced by a priest named Pfarrer Kneipp in a small Bavarian village, who, like Priessnitz, has created quite a *furore* in Germany and has gained numerous adherents. Kneipp's system consists in certain hydro-therapeutic measures, the administration of simple household remedies, and the regulation of the patient's mode of living. To strengthen the nervous system, the patient is advised to walk on moist grass or in a bath-tub filled up to his ankles with cold water. The cold pack, consisting of several thicknesses of coarse linen, is employed in certain cases, the sheet being wrapped around the entire body from neck to groin or applied to the abdomen or back; it should not remain longer than an hour. As regards the use of baths, the cold foot-bath should last from one to three minutes; the warm foot-bath has a temperature of 99° F., and lasts from ten to fifteen minutes and is followed by a cold bath of half a minute's duration. A "half-bath" is administered by letting the patient stand, kneel or sit in water while the back and chest are washed; it should not last longer than three minutes. The sitz-bath is taken before going to bed; its duration may vary from one-half minute to three minutes. If taken warm, it may last for half an hour, and an infusion of herbs is usually added to the water. The full bath, according to Kneipp, is the more effective the shorter its duration, and is mainly indicated in febrile conditions. The warm full bath has a temperature of 90° to 99° F., and consists of an infusion of pine-needles. It is followed by cold affusion or washing of the body with cold water. Steam-baths are carried out in a primitive manner, the steam being supplied by a kettle of boiling water. The cold affusion is made with a sprinkling-can from which the sprinkler has been removed; the entire body, or simply the affected parts, may be acted upon; in weak persons the water should be tepid. Another favorite manner of applying water is to sponge the body or affected parts with a wet coarse towel. This procedure is best done in the morning and should not last more than two minutes.

Kneipp advises that the patient should drink whenever thirsty, but never large quantities of fluid at a time, and none during the meal. His materia medica consists of simple domestic remedies. As regards the dietary, he is opposed to excessive use of meats; does not interdict beer or wine in persons accustomed to their use, but thinks less favorably of coffee and tea. He urges an abundance of fresh air and exercise, and advocates coarse linen underwear in place of woolen garments.

TABULATED TREATMENT OF SYPHILIS.

Dr. Bontemps, in a paper read before the Société de Médecine d'Angers, gives the following table for the systematic intermittent treatment of syphilis:

Months—Years.	1st	2d	3d	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st.....	M	M	I	M	R	M	R	M	I	R	M	I
2d.....	R	R	I	M	I	R	R	I	M	I	I	R
3d.....	R / S	M	I	I	R / S	R	I	I	R / S	R	M	I
4th.....	R / I S	I	I	R	R / S	I	I	R	R / S	I	I	

M—Mercurials; I—Iodides; R—Rest; S—Sulphur.

This table is based upon the methods of Fournier and of Martineau. Taken altogether, we find that there are ten months of mercurial treatment; twenty of iodide treatment; six of sulphur treatment, and eight months of rest. To my mind there seems to be too much time devoted to the iodides; a certain portion could be profitably devoted to the exhibition of the mixed treatment, and probably with benefit to the patient. Another point is the long periods of rest at the inception of treatment. I have found that the same amount of rest, divided into shorter periods, with correspondingly shorter periods of treatment included, is productive of better results and reduces to a minimum the tendency to extensive or destructive lesions.

ICHTHYOL IN PYROSIS.

Dr. Thör (*Norsk Magazin for Lægevidenskaben*, No. 5, 1891) has found ichthyol of use in pyrosis, the sour eructations disappearing after one to two one-centigramme (one-fifth grain) pills or capsules. No disagreeable side- or after-effects.

TREATMENT OF ESSENTIAL PAROXYSMAL TACHYCARDIA.

Dr. Huchard (*Rivista Clinica e Terapeutica*, No. 14, 1891), recommends physical and moral rest, lying upon the left side or the back, with the head low, slight compression of the right or left carotid. The chloride of methyl spray, vesicatories or the cautery may be applied to the back of the neck. During the attacks digitalis by the rectum, on account of the gastric intolerance, will be of service. Injections of caffeine or ether are useful in the cardiac weakness. Nitrite of amyl and trinitrine are contraindicated. During the intervals the patient should abstain from coffee, tea, liquors, exciting substances and tobacco. The general treatment is physical and moral rest, and the use of arsenic as a nervine. In tachycardia, with arterial hypotension, the writer advises the sulphate of quinine with ergot in the following formula:

℞ Quiniæ sulph. } āā gm. 4. (℥j).
Extr. aquos. secal cornut., }
Extr. nuc. vomic. cgm. 10. (grs. jss).
Sufficient for forty pills.
Two pills two or three times daily for fifteen to thirty days.

As a prophylactic, the writer recommends digitalin, taken morning and evening for three weeks, fifteen drops of a solution 1 : 1000 of crystallized digitalin.

TYPHOID FEVER TREATED BY YEAST.

Dr. M. B. Thomson, in a recent number of an Australian contemporary, records some notes of the treatment of cases of typhoid by yeast. In all thirty-seven cases were so treated. Ten were severe, the temperature reaching or exceeding 104°; eight moderately severe, temperature reaching or exceeding 103°; eleven were mild, although the temperature reached 103°; eight were very mild, the temperature never being above 102°. In all recovery took place without any relapse. This point is worthy of note, inasmuch as, according to Fagge, the average proportion of relapses is from two to eleven per cent.—*Med. Press.*

A VEHICLE FOR BISMUTH.

Dr. Taurence (*Gazzetta degli Ospitali*, No. 24, 1891), has experimented with various substances in order to find the best vehicle to keep bismuth in solution, and finds glycerine to best fill the requirements. Four parts of glycerine to one of bismuth may be employed.

MEDICINE.

SYSTEMATIZED DELUSIONS OF AMBITION WITH HALLUCINATIONS AND IDEAS OF PERSECUTION IN A CASE OF MENTAL DEGENERATION.

M. Magnan, in a recent clinic, showed the following case:

K., native of Holland, received a good education; had typhoid fever in childhood. At the age of 18, entered a military school; there submitted twice to be examined to pass for an officer. At the age of 27, married a woman who brought him 40,000 florins. Nothing especially occurred until 1883. The king's son had been dead for some years. The second son also died and there was no one to inherit the throne of Holland. At this time he had some doubts as to his birth and origin, and gradually convinced himself that he was the son of the king. He made a retrospective examination of his whole life, bringing up all incidents which would serve to strengthen his delusion. At this time he began to fear persecution.

In 1883, while singing in church, he was suddenly apprised of the illness of his son and upon arrival home found him dead. He was persuaded that his son had been poisoned. He made an examination and filed a complaint, notwithstanding that the doctor who attended his son stated that he died a natural death. He thought the governess ought to be imprisoned ten years. His conduct now became exaggerated. He bought a fine house in the country, began to bet extensively in lotteries and soon failed. His wife and children left him alone with the two gardeners. One night he heard the dogs bark and said he would go and see what was the cause. It was the son of the burgomaster, who he said had come to assassinate him. At another time he took purgative pills, had violent colic and said he had been poisoned. Often he would overhear conversation in the streets of the Hague: "Here is the son of the king." He addressed the king a note asking for an interview and went to Paris during the arrangement of his affairs. Each month he offered one hundred francs to the consul of Holland to prove how much he hated to be banished. These, with other delusions and hallucinations, characterized this case.

THE VALUE OF THE PHYSICAL SIGNS AT THE APICES OF THE LUNGS IN SUPPOSED INCIPIENT PHTHISIS.

It is a fact well known to physicians generally that in health the percussion note at the apex of the right lung may occasionally be of higher pitch than that of the left apex. An examination of one hundred healthy symmetrical chests by Drs. Fussell and Adams, on the other hand, shows that,—

1. A normal condition at the right apex may be considered a diseased condition.

2. A diseased condition at the right apex may be considered normal.

3. The normal disparity in favor of the right apex may mask diseased conditions at the left apex.

In the *University Medical Magazine* for June, 1891, these authors publish a tabulated list of one hundred cases, taken as they presented themselves at the dispensary of the University of Pennsylvania, the diseases for which these cases were under treatment having no influence on the condition of the lungs.

When it is taken into consideration that the usual site of tubercular infiltration is at the apex of the lung, and that among the first signs of consolidation of the lung are higher-pitched percussion note, increased tactile fremitus and vocal resonance, the importance of the determination of the value of these signs is at once apparent. Of course there are other signs of incipient phthisis; one of which, prolonged expiratory effort, is very suspicious of approaching consolidation, and is a phenomenon which is seldom misleading. It is in those cases where these other signs are absent, masked, or very slight that these variations spring into greater prominence. Again, undoubtedly, the higher-pitched note, when existing normally at the right apex, is perfectly resonant; it lacks the deadened quality noticed in commencing consolidation. Yet this difference in quality is hardest to distinguish in just those cases where the greatest doubt exists, so that practically this difference is of no use. It is of the utmost importance that signs which are perfectly normal should not be mistaken for those of diseased conditions. On the other hand, it is equally important that we do not overlook diseased conditions at either apex, considering the signs as those of health. In the incipient stage of phthisis, so vital is the diagnosis for the future of the patient, and so slight are the symptoms and signs, that every straw adds weight to the conception of the case. A positive diagnosis is demanded by patient and as eagerly sought by physician. The disease is presented in its incipient stage oftener to the practitioner than any other disease, as its symptoms and results are so well known to the laity. Hence, in the majority of normal lungs, we have conditions which at once add suspicion to our conception of cases in which incipient phthisis is feared.

In examining this table, consisting of the reports of the condition of fifty-eight men and forty-two women, we find that eleven, or eleven per cent., have the same percussion note at both apices; nineteen, or nineteen per cent., have slightly higher-pitched note at the right apex; and sixty-nine, or sixty-nine per cent., have markedly higher-pitched note at the right apex, while one was higher pitched at the left apex. In the ninety-two cases where vocal resonance was taken, ten showed no difference at the apices; fourteen showed slight increase at the right apex, and sixty-eight marked increase. In ninety-three cases where the tactile fremitus was taken, no difference was found in eleven cases, slight increase on the right side in twenty, while sixty showed marked difference. Two cases exhibited marked increase of fremitus at the left apex.

In pursuing the examination, as far as possible, the results were obtained separately by each observer, compared, and then obtained together. Many cases where slight variation occurred were verified in this manner. One observer percussed the chest, while the other listened in such a position as to be unable to tell which apex was being percussed. Any case in which there was any difference of opinion as to the existence of any variation was put down in the list as equal on both sides. All the ordinary rules of percussion and auscultation were observed. There was no desire to force cases into one class or the other; the attitude was simply to endeavor to find the exact truth on the subject.

Supposing a case to present itself with higher-pitched percussion note, increased tactile fremitus, and vocal resonance at the right apex, the question, of course, arises whether this is a diseased condition. One of three errors may be made,—

1. A normal condition at the right apex may be considered a diseased condition.

2. A diseased condition at the right apex may be considered normal.

3. The normal disparity in favor of the right apex may mask diseased conditions at the left apex.

It is accepted by physical diagnosticians that the larger size of the right bronchus accounts for the increase of vocal resonance and tactile fremitus, both being due to the same cause,—increased transmission of the voice-sounds. As to the reason of the higher-pitched percussion note at the right apex, there is less clear and united opinion. The note at the left apex ought, if anything, to be the higher pitched; the explanations of the contrary conditions existing are not satisfactory. One explanation is that the liver at the base of the right lung deadens the wave-sounds from the tissue above, while the hollow viscus, the stomach, serves more as a sounding-board for the left lung. The degree of tension of the thoracic parietes and of the lung-tissue itself may account for it, as the greater the tension the higher the pitch.

In conclusion, the authors affirm—

That higher-pitched percussion note, increased vocal resonance, and tactile fremitus are normal at the apex of the right lung as compared with the left; that this normal condition can occur in such a number of cases and to such a degree as to cause in many instances a diagnosis of consolidation at the right apex; that finally, in deciding doubtful cases, other signs besides these three are necessary to formulate a diagnosis; continued observation of cases, where other signs are lacking, being necessary to watch the possible development of actual disease.

The authors report in detail three cases, which illustrate the existence of these three possibilities of error.—*Therapeutic Gazette.*

STERILIZATION OF METAL INSTRUMENTS.

Immersion of instruments in antiseptic solutions, particularly the two per cent. carbolic, is not sufficient to thoroughly sterilize them. Thorough mechanical cleansing is the first thing to do. After use, the instruments are rinsed in common water and laid in a hot soda and soap solution, and with a brush carefully scrubbed. They are then washed again and polished with so-called "*putzstein*" and alcohol and rubbed with chamois, and once more washed off with the soda solution and carefully dried. To sterilize them the use of dry heat requires too high a temperature and too long time. Boiling in soda solution is much better. The apparatus of Schimmelbusch, as made by Lautenschläger, is used. From a small box a spoonful (10 cu. cent.) of soda is taken and put in a litre of water for use in the sterilizer. Hanging with the box are a litre measure, hour-glass and match-safe. The instruments are allowed to boil from five to fifteen minutes, according to their size. The wire tray containing the instruments is then removed and placed in a pan containing a solution of one per cent. each of soda and carbolic acid.

CHANGES IN THE KIDNEY IN PHTHISIS.

The condition of the kidneys in phthisis has never been fully investigated. Several observers have described a fibroid condition. Becquerel and Rayher concluded that Bright's disease was very frequently associated with tubercular disease of the lungs. Peacock, in one hundred and seventeen cases of kidney-disease, found 30.7 per cent. of phthisis. Frerichs found that out of forty-two cases of Bright's disease six also suffered from phthisis. Bamberger stated that the disease was found in fifteen per cent. of those suffering from kidney-disease. In the *Centralblatt für Allgemeine Pathologie and Pathologische Anatomie*, February 1, 1891, Dr. C. von Kahlden publishes his results on the same subject. He is of opinion that slight degeneration of the renal epithelium is almost always found in active phthisis. It may, however, be so slightly marked that it is only visible on microscopic examination, and even then may be easily overlooked. The kidney may be either normal in size or somewhat enlarged. Microscopically the following conditions are noticed: The surface of the organ is smooth and yellowish in color; the capsule peels easily; the cortex is usually slightly thickened, and also yellow in color; the medullary portion is pale. The microscopic changes chiefly affect the cortex, the parenchyma being first attacked. The epithelial cells undergo fatty degeneration, but are occasionally replaced by fresh epithelial cells. The interstitial changes are, therefore, secondary, and generally slight, and take

the form of a small round-celled infiltration, and some increase of the connective tissue. The glomeruli also take part in the degeneration. The cortex is not uniformly affected, but the changes take place in patches. These lesions are evidently chronic, as is shown by the thickened capsule, the atrophy of some of the glomeruli, and the changes in shape of the epithelial cells of the tubules, these being altered from a club form to a cubical or cylindrical shape. Clinical symptoms which accompany the renal degeneration are unreliable. Albumen in the urine is rarely present. The author states that the condition is one of a chronic parenchymatous nephritis, and thinks that it may be caused by the poisonous products of the tubercle bacilli. —*Lancet.*

THE CELLS OF THE SPLEEN AND HÆMOGLOBIN.

Dr. Nicolai Hohlein publishes in his inaugural dissertation at the University of Dorpat a series of experiments made in continuation of the researches of Aug. Schwartz and Nicolai Hoffmann at the Physiological Institute of Dorpat. The former had shown that the protoplasm of various cells both destroys hæmoglobin and regenerates it, and Nicolai Hoffmann found in a hæmoglobin solution, which had been decolorized by spleen cells, an albuminoid; while the same solution, treated with hepatic cells, gave no albuminoid reaction. The author chose spleen cells, mixing them with three times their volume of diluted hæmoglobin solution. Decolorization took place on the average after twelve hours, and the color was completely recovered in from sixty to seventy hours. The author was then able to confirm the following conclusions Schwartz had arrived at. To regenerate a molecule of hæmoglobin, it is necessary to bring it into contact both with the cells and the decolorized liquor. Regeneration occurs also when the decolorized liquor is brought into contact with fresh spleen cells, but in this case the coloring is not so vivid as when the same cells are used which caused the decolorization. If the solution which has been decolorized by spleen cells is brought into contact with liver cells, all power of recoloring by the former is completely and irretrievably lost. The molecule of hæmoglobin is mechanically taken up by the cell which decomposes it, and during the period of complete decolorization of the liquor within the cell it is regenerated. The author adds to these the following independent results of his experiments. In decolorization, as well as in the process of regaining color, the quantity of the hæmoglobin solution is of less importance than its concentration, as with a certain medium degree of the latter all effects of the spleen cells cease. Regenerated hæmoglobin is distinguished from the original by being decomposed with greater facility by acetic acid, by its bright color and energetic oxidation. The albuminoid in the liquor which has been decolorized by spleen cells is cytoglobin. During the stage of decolorization, as well as that of regaining the color, a continuous new formation of cytoglobin is observed. This new formation of cytoglobin also takes place when the spleen cells are mixed with a 0.6 per cent. solution of chloride of sodium, but is in this case not so marked as when a solution of hæmoglobin is used. The hæmoglobin solution loses and the cells gain iron during the decolorization of the former; the reverse process takes place when the solution regains its color.—*Lancet.*

RELATION BETWEEN ALBUMINURIA AND THE RENAL CIRCULATION.

Dr. V. Casaretti, of Pisa (*Rivista Generale Italiana di Clinica Medica*, August 20, 1891), describes some curious results observed by him in cases of cyclical albuminuria. The experiments described were based on a previous observation of Dr. Landi, who had found that in a case of this affection he could for a time arrest the albuminuria by causing slight disturbance of the renal circulation by means of bandages applied to the limbs. The present observations were made on two cases of cyclical albuminuria, and on a third which presented the clinical signs of nephritis with swelling of the face, etc., but without other renal history. In the last case albuminuria was constantly present, but in the two first it was absent in the early morning, only very slight after the first meal, and pronounced after dinner. Application of "expulsive bandages" to the limbs had a most remarkable influence on these phenomena, the albumen disappearing entirely from the urine while the bandages were kept applied in the cases of cyclical albuminuria, and being very considerably diminished in the more serious case. Not only this,

but the effect was observable within a very short time after their application. The excretion of urea also was markedly diminished. As the author remarks, the alteration of the renal tissue must be very slight in these conditions if such a trivial alteration of the renal circulation can so rapidly modify or abolish the symptoms. The method may, if further observation should establish the above results, prove a useful one both in diagnosis and treatment.—*Brit. Med. Jour.*

PAIN IN HEART DISEASE: CONCLUSIONS FROM THE STUDY OF 483 CASES.

Nothnagel (*Zeitschrift für klinische Medicin*, Vol. XIX. No. 3) tabulates 483 cases of valvular disease of the heart with reference to pain. Lesions at the aortic orifice were most frequently accompanied with pain, while lesions at the mitral orifice were the least affected. Sixty per cent. of the cases of regurgitation were accompanied by pain, while only seven and one-half per cent. of the cases of mitral regurgitation had painful attacks. Curiously enough the combination of mitral regurgitation with aortic regurgitation seems to reduce the percentage of painful cases, only eighteen per cent. of such cases having painful attacks. He calls attention also to the frequency of pain in cases of disease of the heart-muscle without valvular disease. He holds that in a case where the diagnosis is uncertain, the occurrence of pain in the cardiac region, while, of course, not making the diagnosis sure, is of the greatest moment in pointing toward heart disease. Cases of arterial sclerosis, with cardiac hypertrophy, are much more frequently accompanied by pain than other forms of this latter class.—*Univ. Med. Mag.*

SURGERY

RESULTS OF TREATMENT OF REDUCIBLE HERNIA BY ALCOHOLIC INJECTIONS.

The original *modus operandi* of Schwalbe, says Dr. Theodore Zangger in the *Lancet*, who introduced this form of treatment in 1871, is slightly modified by Dr. Steffen, of Regensdorf (Zurich). A 70 per cent. solution of alcohol was used, and from two to four grammes of this fluid were injected round the saccus herniosus (hernial sac) after reposition of the hernia. The treatment was ambulatory; first one or two injections a week were made, then at greater intervals. Before being dismissed from medical supervision the patient had to go without the truss which he used during the treatment. The time of treatment varied from one month to two years and a half or more. In 293 cases there were 83 (62 per cent.) cures, 6 (48 per cent.) improvements, 9 (9 per cent.) of negative results. A cure was considered to have been obtained when, at least one year after dismissal of the patient, the hernia was neither to be seen nor felt during coughing or under intra-abdominal pressure, and when the patients, most of whom belonged to the laboring class, had been at their usual work for six or seven months. In 10 per cent. of the cases dismissed as cured the hernia returned, owing to various causes. The age of the hernia (*sit venia verbo*) was not without influence as to the result obtained, as will be seen from the following list:—

Duration of disease.	No. of cases.	No. of cures.	Per-centage.
Hernia incipiens . . .	11	11	100
Date, a few days . . .	10	10	100
Under ½ year	44	41	93.2
" 1 "	45	41	91
" 10 "	120	101	84.2
" 30 "	52	34	65.4
Over 30 "	5	4	80
Date unknown . . .	6	3	50

Dr. Steffen comes to the following conclusions: About four-fifths of small and medium-sized reducible herniæ can be cured, the wearing of a truss becoming in most cases superfluous. The prognosis improves the younger the individual, and the shorter the time the hernia has existed. Incipient cases should, therefore, be treated by injections, and not left to the chance of a spontaneous cure under a truss. Ambulatory treatment, with pauses of from four to seven days, gives better results than daily injection whilst keeping the patient in bed. In most cases the patient does better to continue his usual occupation, wearing a truss during the time of treatment. This method is also adapted to herniæ which cannot be retained by a truss, the latter being able to be worn, and keeping back the hernia after a course of treatment. In a few cases only toxic effects (alcoholism, urticaria, vertigo) were observed. This method of treatment is not entirely without danger; but accidents will be rare if due care is taken and regard paid to the anatomy of the respective parts.

CAMPHORATED NAPHTHOL IN SURGICAL TUBERCULOSIS.

Jules Reboul (*Centralblatt f. Chirurg.*) brings forward a new antiseptic made by incorporating 100 parts of beta-naphthol with 200 parts of finely powdered camphor, and then carefully heating until complete melting occurs, for the treatment of tuberculosis of those parts accessible to surgical treatment. This camphorated naphthol is an oily fluid, insoluble in water, but miscible with alcohol, fats, ether and chloroform. It is decomposed by exposure to the air, the camphor evaporating and the naphthol becoming crystallized. Light decolorizes it, but it may be preserved in dark, well-stoppered bottles. It is not a true chemical combination, but is probably only a molecular union. The antiseptic qualities of the new antiseptic depend, to a great extent, upon those of the beta-naphthol. Its antiseptic qualities have been proven by means of culture, as well as by clinical experiments, by R. It has been used with good results as an irrigating fluid in joints, bony cavities, tendinous sheaths, cold abscesses in the pleural and uterine cavities; and in addition to an interstitial injection, by instillation in cases of tuberculosis of the bladder, and in the preparation of dressings and disinfection of instruments. No poisonous symptoms have been observed, although the undiluted fluid was employed.

STERILIZING DRESSINGS BY MEANS OF STEAM.

Steam is now almost universally used for sterilizing dressings. In regard to the use of dressings impregnated with antiseptics, it should not be forgotten that dryness is a greater hindrance to the growth of germs than are antiseptics, and that it is better to use absorbent aseptic material than non-absorbent antiseptically-prepared stuff that allows stagnation of the wound discharges. It is very doubtful whether material which has been through the many processes necessary for its antiseptic impregnation is as free from germs as is that sterilized by steam. The toxic action of the antiseptic also makes its use undesirable. In using a steam sterilizing apparatus it is better to have the steam enter at the top and escape below; it is quicker and more efficacious. Lautenschläger's apparatus is used by Von Bergmann. This is composed of an outer asbestos jacket and two inner copper cylinders, between which the water is held. When the lid is on, the steam ascends between the two inner cylinders and passes inside to the dressings from openings in the top; it escapes from an opening near the bottom. Heat is applied by a gas jet beneath the apparatus, and it goes up along the sides between the outer copper cylinder and the asbestos jacket to escape by holes at the top. The dressing is allowed to remain three-quarters of an hour, subjected to a heat of 100° C. In order to avoid handling and exposure, the dressings are placed in tin kettles or boxes, having openings at the top and bottom which can be closed by means of a slide. The openings are left uncovered and the apparatus and dressings placed in the sterilizer. When sterilized, the slides are shut and the box taken to the operating clinic for use.

AMPUTATION OF THE LEG UNDER COCAINE ANÆSTHESIA.

Dr. R. H. Cowen writes in the *Internat. Jour. Surgery* that having seen no recent report of major amputation in which cocaine hydrochlorate has been used, he presumes that surgeons generally are slow in following Corning's method. The following case is his own:

Artie McPhail, a negro track-hand, was knocked from a trestle forty-five feet high, sustaining a fracture of the lower portion of the tibia and the metatarsal bones. When he came under his care, ten days later, he found him with an enormously swollen ankle, and a large suppurating wound opening into the neighborhood of the joint. Being unable, on account of the tremendous amount of swelling, to decide the exact nature of the injury, and leaning to conservative surgery, he tried faithfully antiseptic irrigation and drainage. Finding, however, no improvement, an exploratory incision was made under cocaine, revealing complete comminution of the tarsal bones.

He now resolved on amputation. The negro was very much afraid of chloroform, and positively refused to take it. He decided to use cocaine. After applying the rubber bandage above the site selected for amputation, he injected the cocaine as advised by Wyeth, carrying the needle just under the skin, elevating its point, and injecting as the needle was

withdrawn. This was done in four places, by which means anæsthesia was rendered complete all around the limb. He now proceeded to dissect the flaps. Then one or two punctures were made into the muscular tissue, around the limb, penetrating the periosteum, the fluid being ejected as he withdrew the needle. The operation was then completed. At no stage of the procedure was there the slightest pain. The patient, who was afraid of a pin scratch and was badly frightened beforehand was perfectly satisfied with the result and much astonished "that it did not hurt him."

There were no bad symptoms either during or after the operation. On the fifteenth day after, he removed the dressing for the first time. Union had taken place by first intention, with the exception of a small spot left for drainage, which was not as large as one's little finger nail.

RESECTION OF THE SPINE FOR SPONDYLITIC PARALYSIS.

Kraske (*Langenbeck's Archiv.*, Bd. 41, S. 831) discusses this subject at length. He had occasion to perform this operation several times, but the results were not so successful as one would be led to expect from Macewen's article. Paralysis from pressure is the kind most apt to be benefited by operation, but is usually better treated by extension. In tuberculous disease, abscesses and granulation, tissue may form around the cord, constituting a pachymeningitis. The exudate may compress the cord and make it anæmic. Interference with the lymph and blood streams also occurs and may cause œdema. Circulatory disturbances can exist for a long time without causing an irreparable paralysis. When, as is rarely the case, the disease affects the arches instead of the bodies of the vertebræ, operation is indicated and will probably be followed by good results, The improvement which sometimes occurs in these cases without operation has been, in his experience, only temporary. This has made him more willing to resort to operative procedures. The first case operated on had disease of the arches. The results were brilliant. Sensation began to return the same day and in two days was normal. On the fourth day motion began returning, and in four weeks the patient began to walk. Two months later the paralysis returned, and the patient died of tuberculosis of the lungs seven months after. In a second case an exudate into the canal was found, but no good results came from the operation and the patient died eight weeks later. In two other cases granulation masses were found overlying the dura ; in one of these recovery was almost complete in two months ; he then relapsed and is now dying of tuberculosis of the lungs. The results in the other case were not so rapid, but were marked for a while and then remained stationary. Operation may be advised also in those cases of kyphosis in which treatment has proved useless, and in which the onset of the paralysis was rapid, and involved the bladder and rectum. These cases lead to a rapid death anyway, and if allowed to remain long, the paralysis is irreparable.—*Univ. Med. Mag.*

A NEW OPERATION FOR SPASMODIC WRYNECK, NAMELY, DIVISION OR EXSECTION OF THE NERVES SUPPLYING THE POSTERIOR ROTATOR MUSCLES OF THE HEAD.

W. W. Keen, M. D., has devised and performed the following operation in view of the implication of the posterior muscles of the neck (*Annals of Surgery*, January, 1891) which rotate the head in cases of spasmodic torticollis. The operation consists of the following steps :

First Step.—The field of operation having been shaved and disinfected, make a transverse incision about half an inch below the level of the lobule of the ear, from the middle line of the neck posteriorly, or even slightly overlapping the middle. This incision should be two and a half to three inches long.

Second Step.—Divide the trapezius transversely.

Third Step.—Dissect up to the trapezius and find the occipitalis major nerve as it emerges from the complexus and enters the trapezius. In the complexus is an intra-muscular aponeurosis. The nerve emerges from the complexus at a point between this aponeurosis and the middle line, usually about a half inch below the incision, but sometimes higher up, and then enters the trapezius. It is always a large nerve of the size of a stout piece of catgut, and it is easily found if sought for at the right place.

Fourth Step.—Divide the complexus transversely at the level of the nerve.

This division should be made by repeated small cuts, so as not to cut the nerve which is our guide, after which dissect the nerve still further down from the anterior surface of the complexus, where it arises from the posterior division of the second cervical. Cut, or better, exsect a portion of the posterior division before the occipitalis major arises from it, so as to catch the filament to the inferior oblique muscle. This divides the *second cervical.*

Fifth Step.—Recognize the inferior oblique muscle by following the sub-occipital nerve towards the spine. The nerve passes immediately below the border of the muscle.

Sixth Step.—Recognize the sub-occipital triangle formed by the two oblique muscles and the rectus capitis posticus major. In this triangle lies the sub-occipital close to the occiput. It should be traced down to the spine itself, and be divided, or better, exsected. This divides the *first cervical.*

Seventh Step.—An inch lower down than the occipitalis major, and under the complexus, is the external branch of the posterior division of the third cervical to the splenius. When found it is to be divided or exsected close to the bifurcation of the main trunk. This divides the *third cervical.*

A drainage-tube and horse hairs are to be inserted, and as the patient lies on the back, although the wound is very deep, the condition is most favorable for good drainage. If desired, the posterior muscles can be united by buried sutures, independently of those in the skin. The after-treatment is the same as for ordinary operations.

OBSTETRICS.

CÆSAREAN SECTION FOR A GIANT INFANT.

Rachel and Neumer (*Répertoire d' Obstét. et de Gynéc.*, May 25, 1891) report the case of a woman, forty years old, the abdomen of whom, in the twelfth pregnancy, was enormously distended. The labor not progressing, version was attempted, but the fœtus would not pass the superior strait. Disarticulation of the leg, preparatory to evisceration, was attempted, but was unsuccessful. Finally, Cæsarean section was decided upon. The mother died soon after the extraction of the fœtus. The latter, almost exsanguinated as a result of the amputation, weighed twenty-two and a half pounds. The parents were not unusually large. The only explanation of the great size of the fœtus lay in the age of the mother and the number of pregnancies and in the fact that the fatal pregnancy had passed one month beyond term.—*Lyon Medical*, July 12, 1891.

PERFORATION OF UTERUS BY SOUND, AND FATAL SUBLIMATE POISONING.

Dr. Gebhard (*Nouvelles Arch. d' Obstét. et de Gynéc.*, August, 1891), recently observed a patient who had been under treatment from November 5th, 1890, for gonorrhœa. A 1 in 5000 sublimate solution was thrown up by means of a Bozeman's sound, at intervals of a day or two, in the out-patient room. On the third occasion, November 11th, immediately after the introduction of the sound, the patient complained of pain. After nearly a pint of the solution had been thrown up, the pain increasing, the injection was suspended. Vomiting and faintness came on rapidly. Perforation of the uterus and entrance of the solution into the peritoneal cavity was diagnosed. An opium suppository was administered. Dysenteric diarrhœa followed in a few hours. On the next day complete anuria set in. Mucus was continuously discharged from the rectum, which protruded and was ulcerated. Stomatitis with a trifling amount of salivation began on the third day. The patient died on the eighth day. Acetate of potash was given to promote diuresis, but completely failed in its object; pilocarpin caused profuse concentrated perspiration, which exhausted the patient and irritated her skin. Opium had been suspended early in the course of the case, Dr. Gebhard believing that it was contra-indicated in dysentery. At the necropsy two complete perforations of the fundus uteri were found, lying close together near the right tube. The peritoneum was inflamed; the entire large intestine and four inches of the ileum were ulcerated and in parts sloughy. One ulcer had perforated the sigmoid flexure. In the tubuli uriniferi were found cretaceous deposits of the kind described as occurring in the kidneys of patients dead from mercurial poisoning. Dr. Gebhard dwells at length on the pathology of this condition. It appears certain that stoma-

titis and salivation, which follow so sharply on an overdose of mercury by inunction or friction, are not the first symptoms in poisoning by mercurial injections used after child-birth. In that case diarrhœa is the earliest sign, and it rapidly becomes mucous, sanious, and ultimately fœtid. It represents gangrenous dysentery. The next symptom is a marked diminution in the excretion of urine, often ending in suppression. Stomatitis follows third, and may be severe, but salivation is not constant even in fatal cases. The temperature is subnormal. In the case above related, where there was acute traumatic peritonitis at the beginning, the temperature was high for a few days, but fell below normal when the symptoms of poisoning began to predominate. Erythema is rare.—*Brit. Med. Jour.*

URETHRAL CARUNCLE.

Christopher Martin (*Birmingham Medical Review*, September, 1891) thinks this neoplasm has hardly received the attention it deserves. He classifies it amongst the vascular tumors. It is exceedingly doubtful whether the connection between the majority of causes usually assigned to it and the disease is more than accidental. On the other hand, he thinks it likely that in many cases the exciting cause is a highly acid or irritating condition of the urine. Uric acid is peculiarly responsible for many cases. At the end of each act of micturition a drop of highly concentrated urine loaded with sharp crystals is left at the meatus. The crystals settle on the mucous membrane, and possible lodge in the glandular crypts which are so abundant there, and the repeated irritation of their presence determines the new growth. This irritation is partly mechanical, partly chemical. Whether or not it actually causes it, certain it is that, after the growth has developed, a highly acid urine frightfully aggravates the patient's sufferings. The great symptom is pain. The suffering is out of all proportion to the size of the growth. The distress is present on walking, passing urine, during coition, or at any time the parts may be impinged upon. The diagnosis is made complete on inspecting the external genitals. On drawing apart the labia, there is seen at the meatus urinarius, or just within it, a small bright crimson growth. It varies in size from a pin's head to a cherry, but is generally about the size of a pea. It is usually situated on the posterior lip of the meatus. It is very soft and friable, and bleeds readily on manipulation. If carefully prepared sections of a caruncle are examined with a moderate power, the growth is seen to consist of very numerous and widely dilated capillary loops embedded in a delicate connective-tissue stroma. The treatment consists in the *complete* removal of the growth. The patient is anæsthetized and placed in the lithotomy position. An elliptical incision is made in the mucous membrane of the vestibule around the meatus, and about one-sixth of an inch distant from it. By means of fine scissors this incision is deepened, and the entire lower end of the urethra, for about one-third of an inch of its extent, is separated from the surrounding tissues. The piece of the urethral canal thus isolated is gently drawn down and removed by a snip of the scissors. The edge of the divided urethral mucous membrane may then be united to the edge of the divided vestibular mucous membrane by a few sutures, or the raw surface may be allowed to granulate. Cicatricial stricture may be prevented by the regular passage of a soft bougie. If a stricture should form, it may be easily remedied by slitting the urethra up for about a third of an inch. The prognosis as to the likelihood of recurrence after removal should be guarded.—*Univ. Med. Mag.*

TETANY IN MENSTRUATION, PREGNANCY AND LACTATION.

Dr. von Jaksch (*Wien. med. Presse*, 1891, No. 23) noticed the characteristic spasms of tetany in a woman, aged thirty-five, during the fifth month of pregnancy. She first noticed tetany, before a menstrual period, when nineteen years old. The symptom subsided and did not reappear till eighteen months later, during her first pregnancy. The second and third pregnancies were free from tetany, which reappeared during the fourth, and also the fifth, when she was under observation. This case was essentially chronic and seemed to arise from some disturbance associated with extirpation of strumous glands, dyspepsia, pregnancy and lactation. According to Professor Schauta, only a few cases of tetany in direct association with pregnancy have been recorded. Meinert, of Dresden, collected nine such cases in 1885. In one of these tetany

appeared in the third and sixth pregnancies, at an interval of eight years. The symptom increased towards the end of pregnancy, and ceased after delivery. Müller, of Berne, records a very instructive case. A patient, aged forty-five, suffered from tetany from the age of ten upwards, the attacks increasing greatly during her only pregnancy. Trousseau has seen forty cases of tetany during lactation, and about as many instances of this curious affection have been observed during menstruation.—*Brit. Med. Jour.*

PROPHYLAXIS OF PUERPERAL FEVER

J. Veit (*Berlin. Klin. Wochensch.*, 11th May, 1891) contributes an important paper on this subject, advocating almost complete abstinence from internal examination in attendance on labor. The external examination yields the position of the fundus, of the child and of the head, the condition of the child, of the mother, and of the membranes; and if these are all normal, no internal examination is necessary. The indications for internal examination in the first period of labor are—(1) General disturbances—*e. g.*, eclampsia, nephritis, fever, etc.; (2) Local disturbances—*e. g.*, discharge of blood, abnormal painfulness of labor or long duration; (3) Departure from the normal in external examination—*e. g.*, position of head above pelvis in primiparæ or after escape of waters in multiparæ, abnormal distension of lower uterine segment, slowing of fœtal heart sounds, etc. In the second stage of labor internal examination is only rarely indicated, and really only when the question of operative aid arises. In the third stage internal examination should only be made when there is excessive hæmorrhage, and in the puerperium only in fever or hæmorrhage.

AN EARLY SYMPTOM OF WHOOPING-COUGH.

Dr. Huguin, of Tourteron, affirms (*Union Méd. du Nord-Est*, May, 1891) that photophobia with dilatation of the pupil is a useful diagnostic symptom of whooping-cough in the early stage, before the cough has become characteristic. He cites three cases in support of this opinion; two of the patients were children and one an adult, and in all of them the symptoms referred to preceded any other manifestation of the disease.—*Brit. Med. Jour.*

PÆDIATRICS.

BACTERIOLOGICAL RESEARCHES UPON THE SALIVA OF CHILDREN SUFFERING FROM MEASLES.

The investigation of Mery and Pierre Boulloche lead them to conclude that the pneumococcus and the streptococcus are to be found in the saliva of children suffering with measles, with greater frequency than in healthy children. Broncho-pulmonary accidents rarely appear in connection with measles except in those cases in which the streptococcus or pneumococcus is to be found in the saliva. After death one may trace the pathogenic microbe which has been found in the saliva in the upper air passages as far as the smaller bronchi. The very frequent presence of the pathogenic agents of broncho-pneumonia in the saliva of children suffering with measles appears to explain the great number of broncho-pulmonary complications with that disease. Hence the necessity of the most vigorous antisepsis of the buccal cavity during the progress of the disease.

INTUBATION IN 1890–91.

A year ago Professor Von Ranke published statistics of 413 cases of intubation, collected from German, Austrian, and Swiss (German) sources, and compared them with 866 tracheotomies collected from the same sources, and performed within recent years. He now reports (*Münchener medicinische Wochenschrift*, October 6, 1891) 365 cases of intubation performed for diphtheritic croup in Germany, Austria, and Switzerland during the past year. Of these cases 94 were his own and the remainder were performed by the six following operators, namely, Ganghofner, Jakubowski, Von Muralt, Unterholzner, Schwalbe, Baginsky, and Escherich. He has also presented for comparison 237 cases of tracheotomy performed during the same period by Jakubowski, Steffen, and Unterholzner. Of the 365 cases of intubation 348 were performed for primary diphtheria, and 17 for diphtheria secondary to measles. Of the former 143 recovered, or 41 per cent., and of the latter 5 recovered, or 29.4 per cent. Among the whole 365 cases, therefore, there was 148 recoveries, or 40.5 per cent. It must be stated, however, that tracheotomy was performed

in 83 cases, or in nearly a fourth of the whole number, after intubation had been tried. Of these 6 eventually recovered, and it is not quite accurate to include these among the recoveries obtained by intubation, as Von Ranke appears to have done. Of the 237 cases of tracheotomy which he collected, 78 recovered, or 32.8 per cent. The results of intubation are, therefore, superior to tracheotomy, so far as these statistics are concerned, and there is a decided improvement in the results of intubation over those shown in Von Ranke's former report. On that occasion the recoveries from intubation were 34 per cent., and from tracheotomy 38.1 per cent., so that the relative position of the two operations is now reversed. The author attributes the better results to the greater experience which operators now possess, and to the improved tubes which are now employed. He attributes his own improved results in no small degree to the fact that he now leaves the thread in place, and has recourse to the extractor for removal of the tube only in exceptional cases. He thinks it a great advantage that, with the thread in place, the nurse is able to remove the tube when there are signs of its being blocked, and he has noticed that after its removal in such cases more or less membrane is often expelled, and the breathing is easier for a time. He lays stress on the fact that ulceration from pressure of the tube is now very rarely found, and this he believes to be due to the employment of properly constructed tubes.—*Brit. Med. Jour.*

HYGIENE.

THE DIETETIC VALUE OF PEPTONES.

In the current number of the *Journal de Pharmacie* of Antwerp, M. Denaeyer describes a very simple method for the determination of the dietetic value of peptones. The complete analysis is tedious and difficult, and it is even now by no means perfect. M. Denaeyer himself has done much towards its improvement, and we are not the less grateful to him for giving us a method by which the comparative merits of different commercial samples can be obtained with simplicity and some approximation to accuracy. The method depends on the fact that the more valuable constituents of a peptonic fluid are precipitated by strong alcohol, To this class belong albumen, albumose, peptone, and one variety of gelatine. The alcoholic extract retains in solution definite compounds such as creatine, tyrosine, and urea. The mode of working is as follows: 10 cc. of a 20 per cent. solution of peptone are treated with 100 cc. of strong alcohol; after standing for twenty-four hours the extract is removed by decantation, and the precipitate and extract are separately evaporated to dryness, the latter at 105°C., and each is carried to constant weight. The dietetic value of the peptone depends on the percentage of the precipitate, which contains all the true food constituents. M. Denaeyer states that the extract should not amount to more than 30 per cent. of the whole dry matter, any larger proportion being due to products of metamorphosis—such as leucine, tyrosine, aspartic acid, glycocol, amido-butyric acid, and the like. Such an assay, although of practical utility, cannot supersede complete analysis. It is evident, for example, that gelatin would be reckoned by the above process along with the valuable peptone constituents, since strong alcohol precipitates this body.—*Lancet.*

TO DISTINGUISH MARGARIN FROM BUTTER WHEN THE TWO ARE MINGLED.

"Alimentary fats," says M. Lezé, in the *Répertoire de Pharmacie*, "usually contain from 10 to 12 per cent. of water, and, therefore, in searching for a substance to free from this element, it is necessary to utilize something that has a great avidity for the same, without any affinity for the fat."

Syrup of sugar is his choice as an agent in this respect. A solution of sufficient density renders easy the separation of the two substances. He pours into a test tube of 10 ccm. capacity 1 or 2 ccm. of simple syrup, places the tube in a water bath, and adds, little by little, the butter to be assayed, until the 10 ccm. mark is reached. The tube is then corked and shaken, and then a strong thread is passed around the mouth and the tube is rapidly whirled around the head for several seconds. When the whirling stops, if the butter is pure, the fatty matter is clear and limpid, and the whitish emulsion of residual milk, water, and syrup is voluminous and well marked. If margarin be present, the fatty matter remains turbid and milky.

This process permits of the detection of 20, or even 15, per cent. of adulteration.

The aspect of the melted fats is characteristic, and, more than this, margarin exhibits normally the phenomenon known as super-fusion, and communicates this property to fats with which it is mingled. Thus we see a pure butter in cooling becomes first turbid, and finally becoming pasty, while butter, even with only a small amount of margarin, always preserves a semi-transparent condition.

MEDICAL CHEMISTRY.

TO OBTAIN PURE OXYGEN RAPIDLY.

Zinno's method consists in mixing intimately 200 gm. of powdered potassium permanganate with an equal weight of barium binoxide. On the addition of water, oxygen is disengaged. With the amount stated, at ordinary temperature, 13,620 ccm. of pure oxygen are generated. The oxygen is rapidly produced, and is not contaminated by chlorine or chlorine products.

BROMOL.

Bromol, which was introduced into therapeutics by Dr. Rademaker, is a chemical compound, tribromophenol, and is obtained as a white flocculent and gradually crystalline sediment when bromine water is added to an aqueous solution of carbolic acid. Pure tribromophenol occurs as a white crystalline substance which melts at a temperature of 203° F., and is nearly insoluble in water, but readily so in alcohol, ether, chloroform, glycerine, and in fatty and ethereal oils; the odor is disagreeable, like that of bromine; the taste is sweet and astringent. According to some experiments previously published by Grimm, the antiseptic virtues of bromol would seem to rival those of carbolic acid. When it is applied to recent wounds it causes a sensation of burning and has a caustic action; it stimulates atonic granulations, and produces a favorable effect on tuberculous processes. In gangrene it acts as a powerful disinfectant, and accelerates the separation of dead matter. Dr. Grimm applied it to wounds either in a pure state or mixed with some indifferent powder, and as an ointment. He also employed it to impregnate bandages. He considered it inapplicable to the mucous membrane of the mouth, nose, and pharynx. on account of its caustic properties. Dr. Rademaker uses bromol either in substance or in solution of olive oil of the strength of 1 in 30, or as an ointment of the strength of 1 in 10. In diphtheria he brushes the membrane with a glycerine solution of the strength of 1 in 25. As tribromophenol remains undissolved by the gastric juice and is only slowly acted upon during its passage through the intestinal canal, Dr. Grimm made use of it as a disinfectant of the bowel, giving it in doses of from three to seven and a half grains per diem. Dr. Rademaker also has adminstered it in cholera infantum in doses of from five to fifteen milligrammes, and has prescribed it in typhoid fever. It is secreted by the kidneys in the form of tribromophenol-sulphonic acid.—*Lancet.*

ALKALOIDAL ASSAY OF NARCOTIC PLANTS.

Dr. O. Schweissinger has has occasion to investigate the alkaloidal yield of narcotic plants cultivated near Berlin. He reports on his results in *Pharm. Centralhalle* (No. 41). The method of assay which he used was the following:

Ten grammes of finely cut dry herb (aconite, belladonna, etc.) are put into a flask, digested (warm) over night with 209 c.c. of water containing 1 c.c. of diluted sulphuric acid, the mixture being occasionally agitated. Flask and contents having been weighed as soon as the latter had been introduced, any loss of weight which the apparatus has suffered during standing is made good by adding enough water to restore the original weight. The mixture is then allowed to cool, strained, the residue pressed, and the strained liquid measured. It will measure, say, 180 c.c. (which would correspond to 9 gm. of herb). This amount is now evaporated on the water bath under constant stirring, during which time the temperature is conveniently kept at 65° C. (149° F.). When the residue weighs about 20 gm. the thin fluid extract is poured into a measuring cylinder or flask of the capacity of 100 c.c., and alcohol then added up to the mark (100), which causes precipitation. The whole is then thoroughly shaken. (Without this precipitation by alcohol the subsequent treatment with chloroform or ether-chloroform, by

shaking with these menstrua, becomes impossible, owing to the formation of emulsions.)

The evaporation may also be continued down to about 10 c.c., and alcohol then added to 50 c.c. In this case, however, the sediment settles much slower and filtration is more difficult.

After the sediment has been deposited the liquid is filtered. A measured portion of the filtrate is evaporated to 10 c.c., transferred to a separatory funnel, 1 c.c. of ammonia water added, and shaken with 40 c.c. of ether-chloroform (15 c.c. of chloroform+25 c.c. of ether). Twenty cubic centimeters of the ether-chloroform solution are then removed, evaporated in a capsule, and triturated with one-hundredth normal acid.

This method had been published by the author before, but since it has given him so uniform and accurate results, he has now republished it.

The results obtained by the author are interesting also to us, since they show the average yield of alkaloid under several conditions.

	Amount of alkaloid in the		Amt. of water in the herb.
	air dry herb.	anhyd's herb.	
Aconite herb 1 year old, cultiv.....	0 360	0.417	13.55
" " wild (1890).....	0.496	0.585	15.2
" " cultiv. (1890).....	0.495	0.602	17 74
Belladonna leaves, 1 year old, cultiv...	0.189	0.209	12 5
" " wild (1890).....	0.309	0.402	23.25
" " cultiv. (1890)..	0 132	0.172	23.5
Hyos yamus " wild (1890).....	0.072	0 085	15.4
" " cultiv. (1890).....	0.063	0 070	9.85
Stramonium " wild (1890).....	0.289	0.319	9.6
" " cultiv. (1890).....	0 231	0.255	9.5

PREVENTABLE BLINDNESS.

Dr. C. D. Conkey, in an article in the *Northwestern Lancet*, on "Preventable Blindness," April 15, 1891, ably condenses much information in this compend, viz.:

1. The largest proportion of blindness in the young can be prevented.

2. The majority of cases of blindness develop in the practice of the general practitioner, in the course of the invasion of the grave diseases of childhood, or as a consequence to these, or as a result of a contagious leucorrhœa in the mother.

3. To successfully prevent them, prophylactic measures should be adopted in all cases where danger is suspected, or where the eye shows a tendency toward inflammatory action.

4. The physician should be sufficiently acquainted with eye diseases to treat them skilfully when the eye becomes invaded.

5. After all severe attacks of the diseases of childhood the patient's sight should be carefully tested before he is dismissed as convalescent.

NEWS AND MISCELLANY.

ANOTHER BOGUS AMERICAN DIPLOMA.

Recent numbers of American contemporaries announce the arrest of a Dr. (?) Van Vleck on a charge of issuing bogus medical diplomas, his institution going under the name of "The Medical University of Ohio," a title which is dangerously like that of The Medical College of Ohio, which, we are assured, is a comparatively reputable institution. Unfortunately the state of public opinion in far-away Ohio is not favorable to the repression of adventurers of this sort, and the lay press is strongly in their favor, on account of the advertisements which the quacks are shrewd enough to deal round with a liberality bordering on profusion.—*Med. Press.*

WORSHIPPING MEDICINE BOTTLES IN BURMAH.

A good story is told by the *Modern Church*. An eminent lady missionary in Burmah recently gave Dr. A. J. Gordon an instructive but somewhat startling chapter from her experience. In one of her tours, she said, she came upon a village where cholera was raging. Having with her a quantity of a famous pain-killer, she went from house to house administering the remedy to the invalids, and left a number of bottles to be used after she had gone. Returning to the village some months after, the missionary was met by the head man of the community, who cheered and delighted her by this intelligence: "Teacher, we have come over to your side; the medicine did us so much good that we have accepted your God." Overjoyed at this news, she was conducted to the house of her informant, who, opening a room, showed her the pain-killer bottles solemnly arranged in a row upon the shelf, and before them the whole company immediately prostrated themselves in worship.—*Rural and Colonial Druggist.*

INFLUENZA ABROAD.

A noteworthy difference between the present outbreak of influenza and those experienced last spring and the original epidemic of the winter of 1889–90 is the comparative slowness of its diffusion over the country. It is mainly confined to two widely separated parts of the kingdom—viz., Cornwall and the eastern counties of Scotland. The reports from the latter show that some towns and villages in Forfarshire, Perthshire, Fifeshire and Kincardineshire have suffered severely. In Dundee, the epidemic is on the decline, as also at Arbroath, where it has been particularly severe. At Lochee it is reckoned that more than 1600 cases have occurred during the past month, and twelve deaths are attributed to it. It has been very prevalent at Edinburgh, but it seems only to have appeared at Aberdeen quite recently. It is remarkable that children are being attacked almost as much as adults. Abroad, it is reported to be very prevalent in St. Petersburg and Berlin, whilst at Hamburg last week it had reached "alarming proportions," and the weekly mortality of the city and its suburbs exceeded the average by 280. In France it is especially prevalent at Bordeaux, where many deaths among the aged have occurred. It has also, as will be seen from our correspondent's letter, appeared in Paris.—*Lancet.*

COMPRESSED MEDICINE TO BE USED HEREAFTER IN THE ARMY AND NAVY.

The army medical service is interested in a contract which was awarded at the War Department for a new system of carrying medical and surgical supplies for an army. Ever since the last Sioux campaign there has been a growing demand for a plan by which supplies needed by the surgeons could be placed in a more compact form than liquid, and carried with greater safety and economy. The result of the award is believed to be as near perfection as possible. In a small, light wooden chest, 23 inches long, 14½ inches wide, and 17¾ inches high, are sixty square bottles, containing as many different kinds of medicine, but in compressed tablet form, none of them being larger than an ordinary peppermint lozenge. One of these lozenges or tablets contains all the necessary ingredients of a liniment, and when dissolved in an ounce of distilled water its healing properties are the same as if it was in liquid shape and in a big glass jar. Some idea may be formed of the perfection to which the art of compression has been brought by the fact that, if the contents of this small brass-bound chest were liquefied and in their customary jars and bottles, they would occupy nearly one-half of the space of a regular freight-car. After all, however, fluid extracts and powders take up less space than compressed tablets.—*Med. Rec.*

DIPHTHERIA IN MILAN.

The Nemesis of bad water supply has of late been conspicuous in the Lombard capital. We have drawn attention to the severity of the typhoid fever visitation due to that cause. Now we have to refer to another hardly less severe—that of diphtheria. It is in the schools that this latter scourge has been most prevalent, and, as usual, we hear of its ravages long after its first appearance. It must have been in the spring that it began to assume an epidemic form, and it was at midsummer that it numbered most victims. In April the cases were 67; in May, 65; in June, 76. July witnessed a decline in the frequency of its attacks. There were 51 in that month, 52 in August, and 33 in September, when the schools were closed for the holidays; but in October the cases rose again to 45. During the present month the diminution in number has been maintained, and also, it is said, the gravity of the symptoms has perceptibly declined; but there is still diphtheria enough in the city to justify the most active vigilance on the part of the Ufficio Sanitario, and the utmost anxiety in all interested in school management—parents and masters alike. A correspondent tells us of an outbreak of the disease in the Via Palermo, where a much-frequented *scuola communale* is situated. Six cases are already reported in that quarter. Milan has spent much on public buildings, some of which are among the finest in Europe. We have lately seen proposals to replace the façade of her world-famous cathedral by a new one. But as long as her drinking water continues the prolific source of disease, we should think that improved sanitary works, including an aqueduct to put a sufficient supply of *acqua potabile* within the reach of all her citizens, ought to take precedence of all others.—*Lancet.*

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CLINICAL LECTURE.

SURGICAL PYELITIS.

By G. FRANK LYDSTON, M. D.,
CHICAGO.

Professor of the Surgical Diseases of the Genito-urinary Organs and Syphilology in the Chicago College of Physicians and Surgeons.

Gentlemen :—The first case to which I will direct your attention is one of considerable interest. The gentleman is forty years of age, and has been under my care continuously for the last four years. He consulted me originally for a very tight and tortuous stricture in the bulbo-membranous region. This was entered with difficulty after several weeks' faithful endeavor. Dilatation to the size of thirty-two French was finally effected, and occasional dilatation has since kept the stricture in a most satisfactory condition. When I began treatment of the stricture he was considerably debilitated; his digestion was bad, and he was suffering from numerous reflex phenomena of a neuralgic character, referable especially to the vesical neck, rectum, lumbar region. He had run down considerably in flesh. At no time during the treatment of the stricture were any unpleasant results of the dilatation noticeable. It was necessary as a preliminary to treatment by dilatation to incise the meatus. About a year after the stricture had been thoroughly dilated, the patient contracted a heavy cold and developed a slight cystitis, with a moderate amount of renal congestion and some albuminuria. The renal symptoms disappeared, but the urine never cleared up completely, although irrigation and local antiseptic treatment of the bladder, in conjunction with the ordinary measures of internal treatment for controlling cystitis, were kept up continuously for a considerable time. Some months after the cystitis developed, treatment having meanwhile been stopped for a while, the gentleman brought me a sample of his urine, which had assumed an appearance which alarmed him, and which he claimed was getting perceptibly worse. On examination I found an abundance of pus and caudate pelvic epithelium. I satified myself that I had to deal with a case of pyelitis secondary to chronic inflammation of the bladder. The bladder symptoms, however, did not return, nor had they at any time been severe. The pus in the urine increased in quantity, but there were no subjective symptoms. I finally succeeded in clearing up the urine to a great extent, but it all times contained a considerable quantity of pus. Exacerbations have occurred from time to time, but there has been no coincident constitutional disturbance. At times the pus has been present in such amount that on standing fully two-thirds of the bulk has appeared to be composed of almost pure pus.

I hold in my hand a sample of the first urine which the patient passed this morning, and you will notice that it is perfectly opaque and exceedingly thick, presenting the characteristic greenish-yellow appearance of pyuria. You will observe there are no clots of mucus, but the pus is evenly disseminated throughout the fluid, and presents what might have been described as a "powdery appearance." If this be allowed to settle, it will be found that the supernatant fluid will not become clear. This is a peculiar feature of pyelitic urine, and serves in a measure to distinguish cases of pyelitis from pure cystitis. Under the microscope there will be found in this urine (and I will be pleased to have some of the students examine it for themselves) an abundance of pus corpuscles; and it is proper in this connection to say something in a general way regarding the presence of pus in the urine in various conditions.

Pus corpuscles occur in the urine in cases of various forms of chronic inflammation of

the genito-urinary tract. Under ordinary circumstances it is impossible to distinguish them microscopically from mucous or chyle corpuscles. According to Peyer,[1] single pus corpuscles occur in almost every urine, especially that of women. As a matter of fact, the corpuscles described by Peyer are mucous corpuscles. The clinical features of the case must be taken into consideration in the differentiation of pus and mucus, as the microscope alone will not serve to distingush them. Whenever the form of corpuscles presented by mucus and pus occur in large numbers in the urine, the presence of pus may be inferred. Pyuria is invariably an indication of acute or chronic inflammation of some portion of the genito-urinary system. The pus corpuscles are about double the size of blood corpuscles, are opaque, and finely granular, this granular appearance serving to conceal their nuclei which, however, become visible on the addition of acetic acid. The pus corpuscles may be notched in appearance as a consequence of the shrinking of the corpuscular membrane. When the urine is strongly ammoniacal, the pus corpuscles dissolve to a certain extent and coalesce into a mass, losing their form, so that the microscope develops only their nuclei. When urine containing pus is first voided, corpuscles may present under the microscope the peculiar ameboid movement of the leucocyte. We find in these cases—in cases of chronic inflammation of the genito-urinary tract—as a rule, more or less epithelium. Epithelium, however, is frequently in normal urine, being indicative under these circumstances of the same changes that occur in the stratum corneum of the skin, viz., the shedding of effete epithelium. This shedding of epithelium is not abundant under normal circumstances. In the presence of disease it is increased. We therefore find in cases in which there is an abundance of pus or mucopus an increased quantity of epithelium, the form of which depends upon the site of the diseased process.

In case of inflammation of the renal tubuli and urethra the epithelial cells are rounded. Epithelial cells from the vagina and bladder are of the pavement variety, often hexagonal in form, nucleated, and are not to be differentiated from each other. Caudate epithelial cells originate most often in the renal pelvis, this form of epithelium being sometimes spindle-shaped. It is the characteristic epithelium present in cases of pyelitis. In some instances of severe inflammation about the neck of the bladder, caudate epithelial cells are exfoliated. Thus Peyer describes a case in which a large quantity of caudate epithelial cells were found in the urine after cauterization of the deep urethra. The clinical history of the case and the other pathological features of the urine must be depended upon for the deferentiation of the caudate epithelium from the vesical neck and that from the pelvis of the kidney. Pyelitis does not give rise to conditions of the urine which are absolutely pathognomonic of their origin, particularly if, as is frequently the case, vesical inflammation co-exists either as a secondary or primary condition. As is often seen, inflammation of the bladder may, by simple extension, result in pyelitis; while, on the other hand, the irritating product of inflammation of the pelvis of the kidney may induce secondarily vesical inflammation. There is a form of pyelitis resembling simple chronic catarrh of the bladder—and associated frequently with the latter—which frequently occurs in gouty patients, in whom a sensation of uneasiness in the region of the kidneys in combination with the appearance of more or less muco-pus, and the characteristic caudate cells of the renal pelvis in the urine enable us to diagnose the case with some positiveness. In such cases, however, if the neck of the bladder becomes implicated in the inflammation, the presence of caudate cells loses its significance. In a general way, we may state that we have in pyelitis, pus, blood and epithelium in the urine, the characters varying with the acuteness, duration and cause of the inflammation.

As I have already remarked, the pus is inclined to be of a powdery consistency and more finely disseminated throughout the urine than is the case in chronic vesical inflammation. It is, moreover, apt to be of a greenish color from the admixture of hæmatin. I have recently seen a case in which an exacerbation of pyelitis occurred in a young man who had suffered from stricture and vesical catarrh during the progress of malarial fever. In this case the urine had a most peculiar greenish hue, very similar to what might have been expected from the admixture of vegetable matter.

It is unfortunate that these special features of pyelitic urine frequently lose so much of their significance from the frequent co-existence of vesical complications. It must be remembered that abscesses in the vicinity of, and discharging into, the genito-urinary tract give rise to pyuria. In such cases the profuseness and possible intermittency of the purulent deposit in the urine and it close resemblance to the pus discharged from

1. Clinical Microscopy, Page 54.

abscesses in other situations, should lead to a suspicion of the condition present. Even in cases in which the marked clinical features of the case serve as a guide to the correct diagnosis of abscess, the source of the pus is overlooked. Thus I have recently had a case in which I operated successfully for an abscess secondary to disease of the hip-joint, which had discharged into the bladder, the cause of the pus appearing in the urine in this case having been overlooked by several competent surgeons.

A case was recently referred to me of a woman who suffered from chronic inflammation of the bladder with a discharge of an immense quantity of pus in urine. This case upon investigation proved to be one of pelvic inflammation with consequent abscess which had opened into the bladder. Cases of this kind must be taken into consideration in estimating the source of the pus in pyuria. During the progress of the case under consideration, there have been at various times, during the periods of transient renal congestion, mucous and granular casts in the urine.

There has been until recently an abundance of caudate epithelium. I think it will be found, however, that in the specimen which I present to you this morning, no pelvic epithelium will be found and no casts. The renal structure proper is apparently in very good condition, but the pelvic epithelium has probably been so extensively destroyed that its absence from the urine at this time is very readily explained. Considering the quantity of pus in the urine it might naturally be expected that this patient would be quite a sick man, but, strange to say, until within the past week he has not only been able to attend to his business, but has had a fair appetite, no pain or constitutional symptoms, and has received very little sympathy from his friends on this account. For the past week, however, he has been running down, his appetite has failed, diarrhœa and night sweats have come on, and as he has expressed it, he has "suddenly gone all to pieces." I might state, that he has been treated in every conceivable way within the limits of rational therapeutics, and with only moderate success during the several years that he has been under my observation. I am going to try in this case the effect of hypodermatic injections of chloride of gold and sodium.

I shall give for the night sweats Dover's Powder in five grain doses, with every expectation of success from its administration. I shall continue the administration of quinine and iron and cod liver oil, and shall put the paitent upon three milk punches per diem.

Subsequent Course of Case.—Gentlemen, you will recall the case of a patient with pyelitis whom I presented to you six weeks since, and to whom I informed you that I was going to administer the chloride of gold and sodium hypodermatically. The progress of the case has been most satisfactory, and as an evidence of it I present to-day a sample of this morning's urine. You will notice that it is almost clear. If allowed to settle it will be found that there is a very thin layer of purulent deposit on the bottom of the bottle. The patient is getting very fat; his pyuria is checked, and his night sweats have yielded to the use of the Dover's Powder. I might remark in this connection that you will find the Dover's Powder to be the most reliable remedy at our command for colliquative sweating, no matter what its origin may be.

I experimented quite extensively while an interne in the New York Charity Hospital upon the abundant clinical material in our medical wards to determine the relative value of the various remedies recommended for night sweats, particularly in pulmonary consumption. I found atropine not only unreliable but productive of certain disagreeable effects that more than counterbalanced its possible advantages. The mineral acids and other tonic remedies and astringent baths were not much more efficacious than the atropine, although, perhaps, not so objectionable in some directions. I established, to my own satisfaction, the fact that there are but two remedies which can be relied upon to check night sweats. These are the Dover's Powder and the active principle of cocculus indicus or picrotoxin, the former being by far the more valuable of the two.

With regard to the improvement in this case, I am satisfied that the administration of both chloride of gold and sodium hypodermatically is entitled to credit. I rather hesitate in making an arbitrary statement regarding the efficacy of this drug, particularly as its administration is just now quite a fad. But certainly in this case its use has appeared to be attended by most excellent results. How the treatment has acted I do not pretend to say, nor do I claim a single case proves such. I do desire, however, to call your attention to the case particularly, and shall take the opportunity of reporting it for what it is worth, in the hope that the remedy may be duly tried in similar conditions by other practitioners. It is but just to say that I have been using the drug for a

few weeks in several other cases of a milder type of inflammation of the genito-urinary tract, without having obtained as yet an appreciable effect. That the remedy has been in this particular case of valuable service as a tonic and alterative, and that it has had a special action on the affected structures is, to me, quite apparent. I do not, however, claim to entirely eliminate the possible element of coincidence in this solitary case. Further than what I have stated I do not pretend to explain the action of the drug.

I will not at this time expatiate upon calculous, tubercular and other forms of surgical pyelitis, with their attendant features of pyo-nephrosis, changes in the renal tissue, characteristic of the various forms of so-called surgical kidney perinephritic abscess, etc., but will reserve these topics for future consideration.

COMBINED CARDIAC LESIONS.

By JAMES M. ANDERS, M. D.,
Professor of Theory and Practice of Medicine, Clinical Medicine, and Hygiene at the Medico-Chirurgical College of Philadelphia.

Gentlemen:—I am anxious to call your attention to a case illustrating conditions that the books do not have much to say about, namely: combined forms of cardiac disease.

In most text-books on the practice of medicine, you will find very little said upon combined forms of heart disease, and in a great many of the best works there is nothing whatever on the subject.

Now, we know that in a great many cases of aortic valvular diseases, for instance, we have mitral diseases following. Let us bear that in mind. We know that in a great many cases of mitral disease we have, later on, incompetence in the right side of the heart, of the tricuspid valve, and in other cases disease of the mitral valve co-exists with or precedes the disease of the aortic valve, the one condition entirely independent of the other. So we ask, What influence has the disease at one valve upon the progress of the disease at the other and upon the symptoms of that disease? These are questions of vital importance.

When you have combined forms of heart disease you will, as a rule, notice that the lesion at one of the valves stands out quite prominently as compared with the physical signs or the lesions of other valves. Sometimes, however, you will have the trouble at one valve manifesting itself quite as well as at the other, and in these cases you will have frequently great difficulty in making a correct diagnosis and in giving a rational prognosis. Bear in mind that you will meet with them in practice, and that they will give you much more trouble than cases of simple valvular lesion.

We find that the woman before us, H. R., age 25 years, is married, has had three children, and no miscarriages. Father is dead, mother is well except for an occasional cold. The patient has always suffered with sore throat on taking cold. Five years ago she had her tonsils cut, after which the throat improved. A year later she had an attack of suppurative quinsy. Abut a year after she was attacked with a feeling of fulness in the median line of the thorax. This is still present and seems to start from the stomach and result in severe pain, which frequently extends to the forehead and right arm. The pain occasionally causes nausea and vomiting, which has occurred from twice a week to once in two weeks. The pain is especially severe at night, having caused her to rise from bed two or more times every night for the last three years. There is no specific history: appetite is capricious, bowels costive, tongue clean.

You may remember that on making a physical exploration of this chest we found several heart murmurs. We found what we thought was a presystolic murmur at the apex, a systolic murmur at the same place, a systolic murmur at the base, and a diastolic murmur also at the base, making four murmurs. Bear in mind what I said a moment ago about the lesions of one valve standing out prominently. So we find here that the murmurs and the symptoms which corroborate aortic disease seem to predominate over those at the mitral valve. We have here a loud, harsh murmur, heard over the second inter-space to the right of the sternum. We find it transmitted very clearly through the carotids. We find it, however, present over the whole upper portion of the sternum. The fact that you hear it over the whole upper portion of the sternum does not mean that it is not due to aortic stenosis—it is aortic stenosis. But that murmur which is heard all over the upper part of the chest, and is systolic in rhythm, must, if it is due to aortic stenosis, be heard in the carotids, and this is the case here. We also heard a murmur with the second sound, a post-systolic or diastolic murmur in the same situation. It is

almost continuous with the sound we heard that is systolic; was shorter in duration and much less marked, but being diastolic in rhythm, it must be due to regurgitation at the aortic valve. It is made by the recoil of the aorta causing the blood to flow back into the left ventricle.

An interesting point about cases of this kind is this: You have a double murmur at the aorta. Which lesion predominates, the stenotic or regurgitant? Bear in mind, you may have extensive regurgitation and yet have but a feeble regurgitant murmur. You listen over the carotid artery, and if you find that with the first sound you have a strong murmur—a strong aortic stenotic murmur—and a comparatively feeble regurgitant murmur in the same situation, as in the case before us, you are justified in saying that stenosis predominates over regurgitation. If, on the other hand, you find a murmur that is about as well marked during diastole as systole, or if you hear a diastolic murmur distinctly over the carotid artery, and that murmur is preceded by a systolic murmur, then you are justified in believing that the regurgitant predominates over the stenotic lesion.

So in this case we have well marked murmurs over the aortic valves, but we also have a systolic and presystolic murmur at the apex. Bear in mind that from extension of inflammation we may have aortic disease, leading to mitral disease, or the blood pressure of aortic regurgitation may lead to mitral incompetency. In this case the aortic lesion seems to predominate (the aortic stenotic murmur predominating over the aortic regurgitant), and as a natural consequence the mitral trouble following the aortic. In other words, we had aortic stenosis, then regurgitation, the condition leading to mitral regurgitation, and finally stenosis.

Not often do books speak of mitral stenosis, following regurgitation but I have found it so, although the reverse is more often the case. At all events, we have four distinct murmurs. Can you make out four distinct lesions in such cases? Certainly. You cannot rely in these cases upon the symptoms, nor upon the changes that have been produced in the cardiac muscle. For instance, if you have mitral stenosis by itself you have not enlargement of the left ventricle, but rather the reverse, a feeble impulse beat because less blood gets into the ventricle, and you have an anæmic appearance because less blood reaches the peripheral circulation.

You have that same lesion occurring with aortic regurgitation. The blood flows back into the left ventricle, and this, together with the current from the auricle, causes the ventricle to dilate on account of the increased amount of blood flowing into it; and to hypertrophy from the increased work. Hence it is that in all these cases we have a hypertrophied as well as a dilated ventricle. You would not look for a small left ventricle simply because you have stenosis in this case. So you cannot rely upon the changes produced in the cardiac muscle where you have combined forms of heart trouble. You cannot rely upon the subjective symptoms because the symptoms of one trouble simulate those of others in heart diseases, and because they are modified by two or three different lesions. The one thing you can rely upon is the seat of maximum intensity of the murmurs, their rhythm and area of diffusion. In everyinstance here you can confirm the diagnosis by listening to the murmur.

I would like to tell you something about the influence of disease of the aortic valve, upon disease of the mitral valve, tell you something as to how disease of the aortic valve modifies the prognosis and treatment of mitral valvular disease, and other subjects that are of interest and importance to you, and that are hardly touched upon in the text books, but time will not permit.

We, at first, gave this girl for her double lesion digitalis, which seemed to distress her more. I ordered her this because she had œdema and evidences of broken compensation. To-day we find she has not œdema of the feet. Compensation remaining unbroken there is no reason for increasing the force of the contraction of the left ventricle. We have, therefore, taken her off digitalis and are now giving her iron, with the idea of feeding her heart muscle as much as possible, and additionally are treating the catarrhal condition of her stomach. That catarrhal state was due to trouble at the mitral value. She has not vomited since she was last here, the stomach being in much better condition, while all the other symptoms are much improved.

TESTING CASTOR OIL.

To detect cotton-seed oil in castor oil, 10 grams of the suspected oil are mixed with 6 grams of a reagent made with 5 grams nitrate silver, 1 gram nitric acid, 100 grams alcohol, heated to 100° C. on water bath. In presence of cotton-seed oil the mixture assumes a red color after five minutes.—*Apoth. Ztg.*

COMMUNICATIONS.

PATHOLOGICAL CONDITIONS OF NOSE AND THROAT AS CAUSAL FACTORS IN ASTHMA, WITH A REPORT OF SUCCESSFUL CURES OF ASTHMA.*

By LOUIS E. BLAIR, M. D,
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As the title indicates, it is not the purpose of this paper to discuss at length all the various ideas which have at different times been advanced by the many writers on the subject of asthma, or to review the several theories which have been faithfully followed for a time, and then discarded for others no more satisfactory in their results. What interests us directly is: How far do abnormal conditions of the nose and throat cause or modify asthma; and in what relation do the corrections of these pathological conditions contribute to a cure?

I think a new landmark in this subject was established when Weber, in 1872, disputed the bronchial muscular spasm theory of all previous writers. Salter, however, in his extensive researches believed that asthma was essentially a neurosis, and this effect was directly exerted on the cells of unstriped muscular fibre in the bronchial tubes, causing a spasmodic contraction of the same. If we consult the highest authorities, such, for example, as Duane's Dictionary of Medicine, Reynold's System of Medicine, and Pepper's System of Medicine, we find a definition of asthma which is quite vague, while nothing is said for its pathology or even surmised as to its real cause. They have all essentially followed Salter, but none explain satisfactorily the moist second stage, which seems to be due to something else besides muscular spasm solely.

Theodore Weber advanced the theory that the cause of the paroxysm lay in the paresis of the vasomotor nerves presiding over the vessels of the bronchial mucous membrane. He claimed "that under the influence of this vasomotor paralysis there occurs, from some cause, a sudden letting up of the control which is exercised over the calibre of the blood vessels, whereby they become distended to such an extent as markedly to interfere with the passage of air through the bronchial tubes. This paralytic condition having lasted a certain length of time, the membrane maintaining a dry condition, as is always the case in the first stage of the inflammatory processes, gives way and there follows an escape of serum and sero-mucus, thus relieving the engorged blood vessels, which soon regain their normal calibre, coincident with the cessation of the paroxysm." This theory, says an eminent writer, completely harmonizes, not only with the clinical history of asthma, but with the clinical history of the paroxysm. It also favors the nervous cause.

Weber could not assign clearly the disturbing causes which set up this irritation and prolonged it so as to modify the functions of the puenmogastric nerve; however, his paper set other observers to thinking.

A purpose of this article will be to show how the vasomotor nerve supply in the bronchial tubes is naturally disturbed by seemingly remote causes, and by virtue of the anatomical relations which exist in the upper air passages. Let us look then, in passing, at the relations of the mucous membrane and nerve supply of the nose and throat to the lungs, and notice how it is reasonable to suppose that disturbances here can remotely produce such serious paroxysms as are found in asthma and hay fever. This condition is a reflex neurotic one, which is clearly demonstrated by the systemic effects which sprays of cocaine have on the mucous surfaces of the nose and throat; and likewise the use of ether, chloroform, morphine, etc., in overcoming an attack. Dr. Jacobi stated in a recent discussion before the New York Academy of Medicine that "he had seen at least a dozen cases of chorea which had no other cause than chronic nasopharyngal catarrh, deviation of the septum, ozæna, hypertrophy of the tonsils, etc.;" and Dr. Baruch remarked: "The first positive case which removed my scepticism on the reflex influence of nasal peripheral irritation, is a cure of true epilepsy." He traced the cause, as he believed, in the nose, and by removing the cause he cured his patient.

The nerve supply in the nasal cavities, apart from the special nerve of sense, is derived almost entirely from the sphenopalatine ganglion (Meckel's ganglion), the largest of the cranial ganglia, and a part of the sympathetic nervous system. This ganglion also distributes branches to the throat, the head, and soft palate and eustachian tube. Connected with the three divisions of the fifth pair are the four small ganglia which form the cephalic portion of the sympathetic system. Meckel's ganglion is connected with the second division. All the four receive sensitive filaments from the fifth, and motor and sympathetic filaments

* Read before the Albany County Medical Society, Albany, N. Y., Dec. 30, 1891.

from various sources. The ganglia are also connected with each other and with the cervical portion of the sympathethic. Meckel's ganglion is by the videan nerve connected with the facial and the carotid plexus and the pneumogastric. From this anatomical description the sympathetic nervous relations which exist between the nose, throat, eye, ear, larynx, and bronchial tubes will readily be seen.—(Gray, Allen and McClelland.)

Van Loven proved experimentally that irritation of the sensory nerves is followed by reflex engorgement of the territory to which they are distributed. Sexton (The Ear and its Diseases, 1888, page 82) says this of the sympathy of the nerves: "In certain conditions of the system the nerves become exceedingly impressible to excitation. Thus, the irritation produced by the introduction of a speculum or a probe in the external auditory canal will excite coughing, or a desire to swallow and various other sensations in the nose, throat or larynx. Many persons can locate the seat of local irritation thus propagated in the ear in some particular spot in these parts, the sensation being described as burning, tickling, and the like. There is very often an increase in the secretion of mucus in the spot thus irritated. When nerve tension has been long disturbed in this way, reflex phenomena are easily excited; continuous aural, nasal, or dental irritation, even if imperceptible, may affect one part or another until nutritive (trophic) changes are brought about." Now what Sexton has said of the ear and its relations, the same may be said of the upper air passages and the bronchial tubes. Just as surely as a disturbance in the stomach will call forth an asthmatic attack in the proper subject, so also will a seemingly slight offence often, by dust, atmospheric conditions, or otherwise, have its weighty effect on the sympathetic nervous system, though the spheno-palatine ganglion and other nerve connections as instanced.

Bartholow, in discussing the pathology of hay fever, one form of asthma, has this anatomical explanation to offer: "The sneezing, the asthmatic symptoms, and other nervous phenomena, are purely reflex effects, readily explained by the anatomical relations of the affected nerves. Vulpian had long ago shown that ablation of the spheno-palatine ganglion, a centre of the sympathetic nervous system, was speedily followed by profuse catarrh of the nasal mucous membrane. The nucleus of the fifth nerve has close physiological relations with the nucleus of the pneumogastric nerve. Hence a reflex disturbance originating in the terminals of the fifth, may thus involve the terminals of the pneumogastric and its associated nervous conditions, causing amongst other nervous disturbances asthmatic symptoms."

Having noticed the anatomical relations and close sympathy existing in the nose, throat, and bronchial tubes, the results of the theories of Weber will now be taken up, and the further development briefly reviewed. Valtoline in the same year reported a case of asthma, which was promptly cured by the removal of nasal polypi, showing a sufficient cause from reflex nasal irritation. Hack, of Freiburg, Germany, shortly after claimed that there were certain definite "centres" of irritation capable of producing uniform reflex phenomena, such as occur in asthma, and suggested that the anterior extremity of the lower turbinate especially was the region which, in all asthmatics, ought to be removed. His radical theory was not accepted in full, but was productive of good in adding a new idea to further nasal investigations. Before Hack's valuable work appeared, Daly, of Pittsburg, read a paper before the Congress of the American Laryngological Association in New York, in 1881, upon the subject of hay asthma in its relation to nasal and neurotic factors. That paper seems to have been epoch-making in the study of this subject. He attributed the annual recurring attacks "to local chronic disease, upon which the exciting cause acts with effect," and among other things he said: "The parts should be put in order and thereby enable them to withstand the exciting influence of the next recurring crop of bacteria." To criticise Daly's views, with all due respect for his other valuable suggestions, as he was the first to call attention to the condition of the upper air passages, it might be said that his language is somewhat vague and indefinite when he speaks of bacteria as exciting influences. Bacteria have nothing to do with the case. His theory was, to a great extent, borne out in practice, and while he did not at that time fully comprehend the full significance of his new ideas, still he saw his cases do well. Just as soon as the nose and throat were put again into a normal condition the attacks of hay fever were relieved and, in many instances, cured. Daly, however, only thought that this treatment applied to a special kind of ailment, and he did not indicate anywhere that it had reference to asthma in general. Other writers soon elaborated his ideas, and Roe, of Rochester, was

the next to add "that hyperæsthesia is associated with, or occasioned by, a diseased condition, either latent or active, and that the removal of the diseased tissue in the nasal passages removes the susceptibility of the individual to future attacks of hay fever." In the same year Sajous wrote independently of Roe, and believed "that hay fever was due to an idiosynocrasy on the part of certain individuals to become affected by certain emanations;" that "organic alteration of the surface of the nasal mucous membrane altered its sensibility, and destroyed what morbid irritability might have attended the nervous filaments distributed over it," and also that "hypertrophies of the nasal mucous membrane increased its irritability and the intensity of the symptoms."

In 1884, McKenzie, of Baltimore, suggested the term "coryza vasomotoria periodica," on the ground that "the disease is essentially a coryza, showing, in most cases, a decided tendency to periodic recurrence, and dependent upon some functional derangement of the nerve centres as its predisposing cause, and for the production of a paroxysm, a certain excitability of the nasal cavernous tissue is necessary (brought on by a multitude of external irritating causes), plus a hyperæsthetic state of (probably) the vasomotor centres."

He, like the previous writers, had nothing to say for asthma in general, having only hay fever in his mind's eye.

Sir Andrew Clarke, in 1885, formulated his views as follows, which seem to comprehend the scattered opinions of others before him, and which, in a great measure, harmonizes them. According to his theory there is (1) A neurotic temperament (the views of Beard, Bleckley, and others); (2) a local condition of irritability, or positive pathological changes in the upper air passages (the views of Daly, Roe, Sajous, Allen, McKenzie), and (3) an external exciting cause.

Roe, of Rochester, in the *New York Medical Journal*, 1887, summarizes an article on hay fever, and among his conclusions he says: (1) That all cases of hay fever have their initiatory lesion in a diseased condition of the nasal fossæ; (2) that the disease of these tissues induces in the ganglionic centres connected with them an abnormal activity, which is reflected to other tissues and organs; (3) that the disease in the nose may produce disease in other portions of the respiratory tract, which may become independent centres of irritation; (4) that the affection is not *per se* a neurotic disease, nor necessarily associated with a nervous temperament, although persons having a highly nervous temperament, or a neurosis, are much more susceptible to the influence of a local irritant. Roe further says "that the neurotic condition which is often regarded as a cause of hay fever, is itself often developed as the result of the local irritation. These views differ widely, of course, from those held by Clarke and many others. Morrell McKenzie is more conservative. He says: "While admitting that many reflex phenomena may arise from disease within the nose, I must caution the younger specialist that the various complaints referred to as resulting from nasal disease are much more frequently due to other conditions, and that every other possible cause must be eliminated before the nose is incriminated."

Up to 1887 no writer endeavored to show that perennial asthma and hay asthma had anything in common. All the previous writers tried to solve the problem of hay fever, and had nothing to say for perennial asthma, for they saw no relationship between them. Bosworth made a further advance. He showed in an exhaustive and most valuable essay that, according to a vast clinical experience and painstaking observation, hay asthma and perennial asthma, as he classified the latter to distinguish it from the former, were, as he believed, but two subdivisions for the general term asthma. To hay asthma he gave the name vasomotor rhinitis, and to perennial asthma, vasomotor bronchitis. With reference to the existence of the intra-nasal disease, he found such to exist in every case, and to such an extent as to point conclusively to its strong causative influence in producing a paroxysm of asthma. He says such conclusions might easily be questioned, but thinks his argument is good when of the eighty cases he had, forty-six were cured, twenty-six were improved; and this was entirely due to the result of treatment of the nasal disorder. And he further reasons that, if the attack of asthma is cured by curing the nasal disorder, the asthma itself is *caused* by the nasal disorder. He also believes that the neurotic habit has also a great causal influence, and this nervous condition must not be lost sight of in the treatment. Bosworth further says: It is not yet an axiom that every individual of neurotic habit, who suffers from an obstructive lesion in the nose, will necessarily have asthma. However, he believes very often asthma is present in a mild degree, and a careful diagnosis not being made, the distressing symptoms are referred to a supposed

attack of bronchitis. And so the asthmatic habit is insidiously formed, and only when it is worse does it become manifest. In conclusion, he says, he believes three factors enter into the causation of asthma, viz., (1) A neurotic habit; (2) the nasal disorder; and (3) atmospheric conditions—the nasal disorder far outweighs in importance not only the nervous, but all other elements.

At least seven months before I saw Bosworth's article, I was treating perennial asthma in precisely the same way as this author, and as I had been treating hay fever, and reasoned from the close anatomical relation of the upper air passages to the bronchial tubes that the diseases were quite analogous and very likely but different manifestations in different individuals with certain modifying influences of heredity diathesis, etc. I desire to quote a few lines from a letter written to the father of a little patient I treated, who lived in Texas, and who was desirous of learning what I thought of his child's case and what my ideas were as to the plan of treatment, and what could be looked for. The history of this case will be given shortly. I explained to him briefly the close sympathy anatomically existing, and how all the symptoms in his boy's case clearly pointed to the nose and throat as being the seat of most of the trouble. These sentences occur in the letter: "By treating all diseased conditions found in the nose and throat and by building up his strength with suitable tonics, etc., in this way, I think, a great deal may be done for your boy. It appears to me to be by far the most promising plan of treatment yet suggested, as it aims to remove causes and sources of irritation." This patient was entirely cured of an asthma which he had since birth.

I think the fact which has not been properly brought out by previous writers is the *exposed position*, so to speak, of the sympathetic nervous system in the upper air passages through Meckle's ganglion and its numerous connections. All pathological conditions here, whether in the form of deflected septum, nasal spurs of bone causing contact, enchondromata, polypi, hypertrophic rhinitis, etc., may have a direct disburbing influence in causing asthma and hay fever, as has been fully shown. Various authors have queried about causes, and have hidden their indefinite explanations behind the terms "reflexes" and "reflex influences." Here, I believe, is a plausible anatomical reason clearly set forth, and it ought to be emphasized, that: Pathological conditions of the upper air passages have a causal relation in producing or influencing directly the lumen of the minute bronchial tubes causing the embarrassment in the respiratory function in the *first stage* of asthma, and the consequent catarrh in the *second stage*, so ingeniously claimed by Weber. So far as the vasomotor nerve centres are disturbed in the lungs it is easy enough to understand, by referring again to the anatomy of this system. Kirke's Physiology (Wood's Library, 1885, vol. 1, p. 254) says: "Experiments by Ludwig and others show the vasomotor fibres come primarily from the grey matter (vasomotor centre) in the medulla. Thence the vasomotor fibres pass down in the interior of the spinal cord, and issuing with the anterior roots of the spinal nerves, traverse the various ganglia on the prævertebral cord of the sympathetic and accompanied by branches from the ganglia pass to their distributions. These nerves have direct control in modifying the calibre of the blood vessels. An increase of the blood pressure may be produced, among other causes, by stimulation (irritation) of the vasomotor centres in the medulla reflexly by stimulation of the sensory nerves anywhere.

HISTORIES AND SUMMARY OF CASES.

This paper covers a period of observation of five years, and is based upon a study of the cases which have come under my notice. Most of these patients I have had under observation since, and have been familiar with the results of treatment; and have been able to verify the benefits which in most cases have been obtained. I have the record of more than thirty-five cases of asthma and hay fever, but desire to note the histories of only three or four which are typical ones, and illustrative of the pathological conditions found in the nose and throat of such cases, and the method of treatment which was pursued.

Case 1. Louis M——, aged 11. Residence, Galveston, Texas. Has been a great sufferer from perennial asthma and hay fever for years, his asthmatic difficulty dating from the time he was two months old. Has tried all sorts of medication and treatment, including change of residence, both at the seashore and in mountainous regions. His mother said, to her knowledge, he had seldom been an entire month free from some of the distressing symptoms of asthma. Being advised to try a Northern climate, as a last resort, she came to New York City and consulted Prof. Loomis. He gave her no encouragement after examining her child, but thought that inasmuch as she was North she might try a mountainous climate, and suggested the Catskills. She went there, and during the six weeks she was at

Palenville she said her boy never suffered worse, and was satisfied that it was not the place for him. She was very much discouraged, and was about to return to her home in Texas. Having relatives in Albany she paid them a visit before returning, and while here some one suggested my name favorably to her. She brought her boy to the office to see if any relief could be found for him. For days he had not been out of his clothing, his asthma being so bad that it was impossible for him to lie down. The dyspnœa was very urgent, and his whole countenance plainly told what a sufferer he had been. Upon making a careful examination of the nose and throat the following abnormal conditions were found: Both nasal fossæ were very nearly occluded, with enlargement of the middle and lower turbinated bodies, and pressing against the septum; the naso-pharynx was almost filled with adenoids; both tonsils were hypertrophied, almost meeting the uvula in the middle line; the uvula was elongated and rested constantly against the lingual tonsil, which was also very prominent. What was especially noticeable was the extreme sensitiveness of certain portions of the mucous membrane of the nasal passages, especially over the cartilaginous septum and bones; and if but lightly touched with a probe a severe coughing spell, with sneezing, would be called forth. Dust of any kind in the atmosphere would make him decidedly worse, and he had a perfect dread of being in or near a room where sweeping was done. He was troubled constantly with intense itching and burning in the nose, and the slightest cold in the head would make his asthma worse. He was busy fussing with and rubbing his nose almost constantly. In fact he seemed to be all nose. Physically, he was poorly developed, his chest was flattened and narrowed, as is characteristic of children suffering with adenoids of the nasopharynx and enlarged tonsils, both of which conditions rendering free breathing and hence perfect oxygenation impossible. His appetite was poor and his whole appearance denoted one of suffering. His weight was forty-seven pounds. I began to treat him September 1, 1889. The plan of treatment was to alter the hyperæsthetic condition of the mucous membrane in the nose; remove all abnormalities as far as possible; to correct the condition of things in the nasopharynx; to remove the tonsils, etc.

November 1.—Eight weeks after beginning treatment, I noted that his condition was considerably improved. The itching and burning in the nose, and tendency to cough and sneeze gone; can sleep flat on his back now, for the first time since he was an infant; appetite much better and has gained ten pounds in weight.

December 10.—Has no more asthma; eats and sleeps good, and has gained fourteen pounds.

February 15.—The favorable gain continues and has had no attacks of asthma.

He continued to improve very perceptibly, and during the next eighteen months had only one relapse of asthma, due to an attack of bronchitis, brought on by gross carelessness. He grew four inches in height and his weight was seventy-two pounds, a gain of twenty-five pounds. He was entirely cured of an asthma which he had, dating almost from his birth.

Case 2. John G——, 9 Delaware Street, æt. 21, occupation wheelwright and blacksmith. Has had asthma since he was five years old; has had many severe attacks lasting many days at a time. In the summer time has had frequent relapses of asthma, suggestive of hay fever, which would disappear again with the appearance of frost. His occupation as a blacksmith was very unfavorable for his nose and throat, and when the air was filled with dust he always suffered with a relapse of asthma. He was only able to work about one-third of the time. His attacks of asthma were so severe that there were many days consecutively that he could only find ease by sitting upright in a chair leaning on a pillow, resting his head on another chair in front of him.

Examinations of nose showed hypertrophic rhinitis, and the usual sensitive spots and areas which have been so well pointed out by McKenzie, Daly, Roe and others. Touching these sensitive places would at once set up a fit of sneezing and nasal coughing, and if persisted in would provoke a slight asthmatic attack. It was also interesting to note in connection with the treatment that after the use of the cautery or an acid in the nose, the reflex irritation would produce usually a severe relapse of asthma, lasting very often for two days, which very clearly pointed out nasal irritation and its reflex disturbance on the nerve supply in the lungs. This has often been observed in other cases, and I have often told patients not to be surprised if their asthma would be at times worse immediately after treatment, and wherever this reactive asthma has been marked the result of treatment has invariably been good.

Contrast with this the observation of R. H. Blaikie (Edinburgh) who says: "In the case of reflex neuroses, due to nasal affections, cocaine may be used to confirm the di-

agnosis, since the parts of the nasal passages to which it is applied will no longer be capable of producing the symptoms, such as fits of sneezing, asthma, etc., which their former condition set up.

I began to treat this patient December 1, and twenty days after made the following note in my case-book: No asthma except after cautery and has gained ten pounds.

March 1.—No more asthma since beginning treatment and has gained twenty pounds. Has not lost one hour from his work this winter by reason of sickness, something which he never did before. He was discharged cured. I saw him a year and a half afterward and he had gained eighty pounds in weight, and was a car builder at the West Albany shops. He considered himself physically as well and strong as any man in his shop, and had not lost a single day from work by reason of his former malady since he stopped treatment.

Case 3. Miss Mary K——, æt. 13, a patient kindly referred to me by Dr. Townsend. She was suffering with hay fever and perennial asthma, the latter, however, was quite mild, only showing itself when an acute attack of bronchitis would come on. She had been ailing with her asthmatic difficulty since her second year, and in her third summer had real hay fever. Her parents tried all sorts of medicines and cures, change of climate, etc., but all to no purpose. She suffered intensely from a constant itching and burning in the nostrils, which extended to the eyes, and the lids and surrounding tissues were actually ecchymosed from the severe rubbing and weeping, giving her face a very peculiar appearance. There was also a considerable conjunctivity, photophobia, etc., and together with the very sensitive condition of the nose, her feelings were anything but comfortable. Examination of the nose showed: Right side—septum anteriorly and low down an exostosis extending lengthwise backward, covered with a mucous membrane exceedingly sensitive and in close contact with the lower turbinate, which was abnormally large. The pressure here by contact was a constant source of irritation, and had a very decided influence in keeping up this difficulty. The whole septum was exquisitively tender, and touching it lightly with a probe anywhere caused severe pain, lachrymation, and set up at once a paroxysm of sneezing and coughing. The middle turbinate was likewise hypertrophied and tender. Left side—hypertrophic rhinitis is also marked, but the mucous surfaces not so sensitive. The method of treatment consisted in removing the exostosis, in separating the two sensitive surfaces from further contact, in obliterating the tender spots as far as could be determined; to place the nose and throat in a healthy condition, etc.

I began to treat her August 17, previous to which from June 1 she had been a great sufferer from all the usual and distressing symptoms. After the first treatment, which consisted in removing the exostosis from the septum, she had a severe relapse of asthma, and had others also due to the operation. Six weeks after the first visit all traces of hay fever and asthma were gone, and she has enjoyed unusually good health ever since.

Case 4. Bessie F——, aged 9, a patient kindly referred to me by Dr. Gorham. Had a history of asthma dating almost from her birth, and suffered very much like Case 1, Louis M——. The condition of the nose and throat was very much like that of the little boy, and her difficulty was a most obstinate one to relieve. After months of careful treatment her condition was but very little improved. Her general health was poor.

However, I felt confident that as her general health would improve, her asthmatic trouble would do better, and so predicted. There were many sources for reflex irritation removed, and judging from the success in the other cases, and taking into consideration her age, it was reasonable to infer that the old difficulty would be removed. Six months after I last saw her, I received a letter from her mother, saying that Bessie had never been so well, and was gaining constantly.

CONCLUSION.

I have thus dwelt at length upon the various theories and views of writers in order to show what the advanced sentiment is in regard to this subject in medicine, which evidently remains to be written. Its present treatment by therapeutic means alone is very unsatisfactory as every one will admit. Time-worn remedies have been discarded for newer ones more encouraging, and these in turn abandoned for others. There is no specific for asthma. Each case must be studied by itself. The physician must satisfy himself as to the *integrity of the upper air passages*, more especially the nasal cavities. Here is the most prolific cause of asthma, a fact which has now been fully proven by most careful writers, and by most successful and convincing records of treatment. In all of the thirty-five cases which I have treated, abnormalities of the nasal cavities were verified; and those cases which were not bene-

fited, I believe, that other and remote nervous disturbances were influential in keeping up a reflex asthma.

204 State St.

SPECIFIC FOR "LA GRIPPE."

By JOHN D. McGIRK, M. D.,
PHILIPSBURG, PA.

I wish to make a statement to the medical profession concerning my experience in the treatment of the prevailing epidemic, la grippe, or influenza, which is producing such a furor in the world, and in the treatment of which there seems to be nothing but confusion. The treatment of this disease, so far as a specific has been found, seems to have been given up by common consent. This was admitted a few days ago by one of our eminent professors in a lecture to his class, and was published in the Philadelphia Times of the 6th instant.

The number of remedies suggested has been very great, most of them useless, many unscientific, and some extremely foolish; such, for example, is the treatment with whisky and quinine—a more unlikely combination to cure a disease like la grippe could scarcely be conceived.

If this influenza is the same disease, and characterized by the same symptoms in Philipsburg, Pa., as it is everwhere else, and known by the common name of the "grip," then I claim that the treatment I have been using is a specific in the fullest meaning of that word. I claim that the remedies I use will completely and permanently break up the disease in from eight to sixteen hours in every typical case, which I have seen verified in more than two hundred cases of an unbroken record, and which I am now treating daily without a failure. The specific is a combination of fluid extract of aconite root and fluid extract of gelsemium. The aconite controls the fever, while we have in the gelsemium the most powerful febrifuge and anti-neuralgic remedy in the pharmacopœia, and in the combination of these two we have a therapeutic Hercules which, in power and range of application, cannot, apparently, be equaled by any other drugs in the world.

Now let us apply the treatment. I see my patient, say at 9 A. M., an adult of ordinary size and physique, and listen to the following history: "I felt chilly for several hours yesterday, then I began to have headache and pains all over my body, now I am burning up with fever and my head is almost bursting, and my eyes pushing out of my head. My head feels as if there was a force pump inside of it trying to break through the skull. I never had such a headache in all my life—what is it doctor? Is it what they call the 'grip'?"

The above is a fair sample of what every doctor has heard. I now examine my patient, and find a full bounding pulse (such as would indicate bleeding forty years ago) of from 100 to 140 pulsations to the minute; skin very hot, it may be moist, but is usually dry; temperature 102° to 105°; skin, red; face, flushed; eyes, red, prominent and full of tears; great thirst, and, perhaps, delirious, etc. This is the disease which has been prevailing in our town, and what we recognize as la grippe. I assure my patient of a speedy and permanent recovery. I take from my pocket case a vial of fluid extract of aconite root and put three drops in a glass, and add twelve drops of fluid extract of gelsemium, a little water is added and this constitutes the first dose. I then order him to bed, with strict injunction not to leave under any circumstances.

I am at his bedside again at the end of four hours; find the pulse a little softer, not quite so frequent; the skin a little cooler and thirst not quite so great. I now give a smaller dose two drops of the fluid extract of aconite, and ten drops of the fluid extract of gelsemium, and I say to my patient: "I will see you again at the end of four hours, when in all probability you will be bathed in a profuse perspiration, your headache and backache greatly relieved, and in every way feeling better, but under no circumstances remove any of your covering, lie still and sweat until I see you again, drink no lemonade, but a swallow of cold water (not iced water) may be taken occasionally.

When I see my patient again at the end of another four hours I generally find him in a profuse perspiration, headache all gone, or greatly relieved, all pains and aches much better, pulse normal in size and frequency; temperature 98.5°. This is the end of his grip, as a rule, but in case I find on my third visit that the pulse is still a little full, and the perspiration slight (perhaps none, but this is very rarely so), I repeat the dose, two drops of the aconite and eight drops of the gelsemium, and on my next (third) visit, after another interval of four hours, I find the treatment has accomplished the great essential, complete relaxation of the system and "restoration of equilibrium" in the circulatory and nervous systems, and there follows as a

necessity normal pulse, normal skin, normal temperature, normal respiration, and normal everything. A fourth dose is scarcely ever required, and I believe I have not found it necessary but in four or five cases out of more than two hundred.

It is the combination and careful administration of these powerful remedies that I have found such perfect success following their administration in *every case.* A little backache may linger in a few cases for twenty-four hours thereafter, and a sense of soreness all over the body is, of course, to be expected for a while after convalescence, but a small dose of the gelsemium (three or four drops) removes the backache, whilst a rubbing of the body all over with the hand, and olive oil, is exceedingly grateful to the patient. This must be done by the nurse passing his or her hand under the bedding, in order to avoid any possibility of taking cold. The hand of the nurse must be warm and the oil as hot as the hand will bear. I used this remedy on "general principles" in the first case I treated in the epidemic of 1889, and have used it in our present epidemic, and have nothing more to desire in the way of a *specific treatment.* I know of no serious disease which yields so promptly and permanently, and which has engendered so many feelings of gratitude from my patients as in the treatment of this disease by old-fashioned, common-sense method. I have not had a case of pneumonia nor anything else following this disease. My patients get sound and well and remain so.

A few precautions are necessary. The perspiration will generally last twenty-four hours or longer after the disease is broken up, and I forbid the patient getting out of bed for three days, and not to leave the house for a week. I give no purgatives prior to the third day of convalescence, and usually by that time they are not required, the bowels moving naturally. I seldom give tonics, as the appetite becomes ravenous, and digestion and assimilation perfect, which is the best of all tonics. I *never prescribe* this medicine for the patient to take himself, *and never leave a second dose with the patient to be taken at his own discretion.* I give *every dose myself, and never give a second until I am satisfied the former dose has done all it can,* for I have frequently found *a single dose* accomplish all that is required. A possible idiosyncrasy on the part of the patient must not be forgotten. No toxic symptoms have manifested themselves in any of my cases, but the intelligent physician will readily understand that he cannot be too cautious when handling such potent remedies in heroic doses. Professional brethren, please try this treatment (following the directions to the letter) in genuine la grippe, the worse the case the better, and report results to THE MEDICAL AND SURGICAL REPORTER.

ADDENDUM.

I have found that gelsemium alone is an abortive for la grippe in its *milder form, when there is little or no fever.* A general feeling of malaise, with wandering pains in the head, eyes, and body. What might with propriety be called grippy sensations. Two or three five (5) drop doses of fluid extract gelsemium, repeated at intervals of two hours, will seldom fail to afford complete relief.

The distressing bronchial cough, with a sense of pain and oppression in the lungs and throat, which accompanies so many cases of influenza is soon relieved by mustard plaster on the chest and the following expectorant mixture:

℞

Muriate of Ammonia c.p	ʒ iii
Morphia Sulphate	gr. iii
Spirit of Chloroform	ʒ i
Tr. Scillae	ʒ ii
Syr Senega	ʒ i
Sp. Rock Candy	q. s. add ʒ iv

Mix. A teaspoonful in water every two or three hours.

PERITONITIS.*

BY X. O. WERDER, M. D.,
PITTSBURGH, PA.

While peritonitis, as a disease, was well known to physicians of all ages, a full knowledge of its pathology and an intelligent method of treatment is clearly the work of modern investigators. Its etiology particularly was very little understood until the phenomenal advances in abdominal surgery cleared the darkness and threw light into the mysteries hidden in the abdominal cavity. Hand in hand with the surgeon worked the pathologist, and their combined efforts brought about a revolution of our views of the disease and its treatment. In no branch of medicine has such wonderful progress been made as in that pertaining to the peritoneum and the organs it invests. It is true this progress has benefited surgery much more than medicine; so it appears that peritonitis, at least many of its forms, is rapidly becoming a surgical disease. The diagnosis of peritonitis does not satisfy the progressive mind of the modern physician; he has

* Read before the Allegheny Medical Society, Nov. 17, 1891.

learned the importance of striving to arrive at its cause and seat which, though *contained* in that large cavity invested by peritoneal membrane, may *belong to* any of the many organs located there. Peritonitis is, therefore, a general name for many diseases, differing not only in their symptoms, pathology and etiology, but frequently also in their treatment. They are only alike in as much as they are all accompanied by inflammation of the *lining* membrane of the diseased organs, the investing peritoneum.

To enter into a detailed description of all these forms of peritonitis would be a task impossible to me without transgressing the limits of my time. I, therefore, decided to confine my remarks to two large groups of this disease which are by far the most frequent and important, the one affecting with particular predilection the male sex, especially the younger portion of it; the other is, exclusively, a female disease. I refer to peri-typhlitis or, more correctly, appendicitis and pelvic peritonitis.

Formerly most inflammatory conditions in the right illiac fossa were regarded as a typhlitis or peri-typhlitis, the former being a catarrhal inflammation of the mucous membrane of the cæcum, the latter an extension of this inflammation to its surrounding peritoneal covering and especially of the retro-peritoneal connective tissue of the cæcum, which was frequently accompanied by abscess formation in this retro-peritoneal tissue, caused generally by perforation of the cæcum through its posterior wall. These collections of pus were, therefore, thought to be outside of the peritoneal cavity. Disease of the appendix was much less connected with inflammation in the right iliac fossa. Within the last few years our views have experienced a decided change, principally influenced through the experience gained by the numerous abdominal sections made for this disease. Inflammation of the cæcum or peri-typhlitis is now regarded as very rare, at least on the primary lesion, while appendicitis is extremely common. McBurney says that in a hundred cases of inflammation in the ilio-cæcal region, ninety-nine are cases of appendicitis.

An appendicitis may be a simple catarrhal inflammation of the mucous membrane of the appendix vermiformis, causing few or no symptoms, excepting, perhaps, some slight tenderness over the region, which may be easily overlooked, accompanied by more or less disturbance of the digestive organs and often some febrile symptoms. The appendix in such cases generally contain small fecal concretions which act as irritants to the mucous surface and are accused of bringing on the inflammatory trouble, though in eight cases operated on by Lewis A. Stimson in only one were there concretions of sufficient size to be justly blamed for the existing condition. Foreign bodies, such as cherry pits, grape seeds, etc., are much rarer the cause than was usually supposed, and according to Jacobi, it is probable that "few, if any, foreign bodies enter the process unless the latter has previously lost its elasticity and contractility by an inflammatory change." This catarrhal inflammation may be followed by a complete resolution and permanent cure, but in many cases frequent relapses occur. The appendix may not be able to rid itself of these irritating fecal concretions, or the previous inflammation may have left a stricture at its cæcal orifice followed by retention of its own secretion, which may give rise to renewed attacks of inflammation, especially if excited by some traumatic influence. This may not confine itself to the mucous membrane, but extend to the submucous tissues and serous coat. Lymph is thrown out over its neighboring structure and adhesions are formed, encapsulating the original seat of disease, the appendix, and surrounding it by a barrier intended by nature to protect the general peritoneal cavity, should ulceration and perforation result in the appendix. An abscess now forming would, contrary to olden teachings, be intra-peritoneal, though not communicating with the general peritoneal cavity; loops of intestines glued together may form the abscess wall and prevent general septic peritonitis and death. The mass often felt in the right iliac fossa is nothing else than this exudation surrounding the diseased appendix which may have become organized into a distinct abscess wall. When inflammation and perforation come on suddenly and before nature has time to protect the general peritoneal cavity by such a provisional lymph-barrier, a violent septic peritonitis is the result, with death in two or three days. The autopsy of such a case I witnessed three or four months ago. The subject was a young, vigorous man who was taken severely sick with peritonitis and died at the end of the third day. The whole abdominal cavity was in the condition of septic inflammation; the appendix was perforated and sloughing, containing a cherry pit, and the cæcum almost gangrenous and also perforated. In such cases there generally have been previous attacks of appendicitis, though in this instance no history of such could be obtained.

If an abscess has formed the pus may find its way under the abdominal walls or into the retro-peritoneal tissues, or it may rupture into the general peritoneal cavity, or into an intestine. Within three months I have seen two cases with rupture into the bowel. In one, a boy of 16 years, the only thing he complained of when he consulted me was inability to walk on account of stiffness and contraction of the flexor muscles of the thigh. An examination revealed a deeply seated mass in the right iliac fossa, tender on pressure. As this mass, in spite of rest and appropriate treatment, increased in size, it was decided to operate. On the morning of the day set for operation he had a number of stools containing evidences of pus, and the mass had almost disappeared. The other case had two attacks of appendicitis within three months, during the second of which the abscess ruptured into the bowel. In both this accident was followed by rapid recovery.

The disease may produce no symptoms outside of those of an ordinary indigestion, so long as it is confined to the mucous surface of the appendix. Severe symptoms point to a more violent inflammation not confined to the appendix alone. Such cases may be ushered in by vomiting, and sometimes purging, accompanied with severe pains, particularly in the ilio-cæcal region; the pulse is accelerated, temperature often high, face anxious. On pressure we find tenderness over the seat of the disease, the abdominal muscles over the region are tense and rigid. Tympanites may supervene. These symptoms may continue three or four days and then gradually subside. In many cases a tumor can be felt in the region of the appendix. If these symptoms continue unabated beyond the third or fourth day, especially if tympanites increase, the pains remain severe, the pulse becomes accelerated, the temperature rises to 102° or 103°, perforation and formation of abscess may be looked for. Cases beginning with violent symptoms, intense pain, severe vomiting, marked tympanites, great tenderness in the ilio-cæcal region, which rapidly spreads over the whole abdomen, rapid pulse, are of the gravest nature and denote perforation into the general peritoneal cavity. A pulse of over 120, with rapid breathing, slight cyanosis, are extremely bad prognostic symptoms, as they are the expression of toxic effect on the action of the heart.

Frequently appendicitis does not have a typical course, and its diagnosis may be very difficult. The pain may be referred to other parts of the abdomen, the cæcum being such a movable organ that displacement and change of position is not infrequent. Then again it may be disguised by other symptoms or complications, such as strangulation or obstruction of the bowels. Ransohoff reports twelve cases in which appendicitis ran its course without any other symptoms than those of internal strangulation of the bowels. Hartly also reports two cases in which an operation was performed for internal strangulation, which proved to be intestinal obstruction from adhesions to the wall of an abscess formed by a gangrenous appendix. It would, therefore, be well in all obscure acute cases of abdominal troubles to keep in mind how frequently appendicitis bears a causative relation to many of these acute affections of the peritoneum. In obscure cases "McBurney's point" may be of some diagnostic value. In McBurney's experience in every case "the seat of greatest pain, determined by the *pressure of one finger*, has been exactly between an inch and a half and two inches from the anterior superior spinous process of the ilium on a straight line drawn from the process to the umbilicus. This point indicates the base of the appendix where it arises from the cæcum, but does not demonstrate that its chief point of disease is there."

The large majority of cases of appendicitis recover. Statistics in regard to the mortality of the disease differ greatly, however. It is a remarkable fact that German statistics show a much more favorable prognosis than those of America. Dr. Fred Lange, of New York, thinks that either appendicitis in America is more fatal than in Germany, or else the very severe cases in that country do not go to the hospitals, from which such statistics are derived. He says "Americans eat much, particularly concentrated food, masticate very little, and suffer from constipation," and are, therefore, particularly liable to this disease. Renvers treated at the University Clinic in Berlin, within four years, fifty-four cases, of which three died. It is also stated that out of 2,000 cases of inflammatory conditions in the right iliac fossa in the German army, 96 per cent. recovered without operation. Nothnagel treated at his clinic in Vienna from 1882 to 1890, 65 cases—55 men and 10 women, two-thirds of them between the ages of 11 and 30 years, with a mortality of three. Matterstock, however, gives, out of 177 cases, 30 per cent. mortality, of 70 children under 15 years, 70 per cent. Fitz, in the "Transactions of the Association of American

Physicians," states that he observed 72 cases, of which 74 per cent. recovered and 26 per cent. died.

Simple cases of catarrhal appendicitis usually make a speedy recovery under treatment by absolute rest in bed, restricted diet, laxatives, particularly calomel or the salines, morphine, hypodermatically if absolutely required for pain, hot fomentations and possibly leeches. It is the severe forms that give the physician greatest anxiety and tax his skill to the utmost. The greatest difficulty is to decide when to interfere surgically. Unfortunately, the symptoms are only too often unreliable guides; often when the symptoms indicate the necessity for operation the patient has already passed beyond the hope of relief.

Lewis A. Stimson says: "We have no means of distinguishing those cases which will go on to the formation of an abscess without accident from those in which evolution will be gravely interrupted." He, therefore, recommends early laparotomy (within the first three days), as it enables us to avert the process by the removal of the cause, and regards it as less dangerous than the expectant treatment. McBurney states: "The pathological condition of the appendix as compared with the symptoms in my own cases most positively show that one cannot with accuracy determine from the symptoms the extent and severity of the disease." Mynter says: "That we are utterly unable to judge correctly from the symptoms alone of the extent and severity of the appendix lesions and for this reason alone abdominal section must be the safest method of treatment." I believe that the advice of Thos. S. R. Morton, who, in connection with his father, Thos. G. Morton, has devoted considerable attention to this disease, and whose experience in the surgical treatment of this disease has been quite extensive, is not only good, but sufficiently conservative to meet the approval of the non-operative physician. It is, "to operate not later than the third day of the disease, if the patient up to that time has failed to markedly improve, under rest, restricted diet, purgation and topical applications. Especially should this rule be adhered to in cases where we have failed to move the bowels—they are apt to be of the fatal cases. Further than this we should invariably operate as soon as the presence of pus is assured; when peritonitis is developing and spreading; when signs of sudden rupture of an abscess into the peritoneal cavity appear, and when septicæmia from septic absorption is taking place. In children operation must often be done earlier than in adults, as in them the malady is more speedy in development, more fatal in tendency and shows greater proclivity to involve the general peritoneal cavity." (Thos. S. R. Morton, Philadelphia County Society, Sept. 28, 1891.)

Pelvic peritonitis is the most common form of peritoneal inflammation in the female. It is most frequently localized with a tendency to remain so, and follows an essentially chronic course, with occasional acute exacerbations. More so even than appendicitis is it characterized by frequent relapses. One-third of all gynæcological cases are victims of this disease. Bande found residue of circumscribed peritonitis in more than half of all female cadavers, Winkel in more than 33 per cent., A. Martin in 122 out of 287 cases of tubal disease.

The cause of pelvic peritonitis or perimetritis, as it is also called, in a large majority of cases, is diseased tubes. This is a fact which has only been learned quite recently. Most inflammatory conditions in the pelvis were thought to originate in the cellular tissue, and from there sometimes to invade the peritoneum; cellulitis was, therefore, the primary and most important disease. Not later than six years ago, Emmet, in the last edition of his work on Diseases of Women, says: "I shall employ the term 'cellulitis' in expressing the most common condition of pelvic inflammation in connection with non-puerperal diseases of women. Pelvic peritonitis will not be treated of as a distinct lesion, but as an accident, rendering the case of cellulitis more grave in character from this complication." The first description of the true pathology of pelvic inflammation was given us by Bernutz and Goupil, over thirty years ago, who, by a careful examination of ninety-nine cases, both during life and in the post-mortem room, pointed out very clearly that it was not the cellular tissue which was involved in this inflammation, but the peritoneum and that the cause of it originated in the fallopian tubes. Their teaching, however, was entirely ignored until operative surgery has opened up the peritoneal cavity to daily explorations and found the conditions exactly as described by these investigators. The masses and indurations generally found in the pelvis by bi-manual examinations and spoken of as exudations in the pelvic cellular tissue can be removed by the surgeon from the peritoneal cavity; they do not involve the cellular tissue to any extent,

but consist of ovaries and tubes folded upon themselves, matted together by exudation and adherent to the posterior surface of the broad ligament of the uterus. Frequently we find also intestines and omentum or an appendix as a part of the tumor. Polk, in 1886, in a paper on the "study of sixteen cases of so-called pelvic inflammation, known as 'pelvic cellulitis,'" states that abdominal section was made in all these cases and the lesions found were salpingitis, peri-ovaritis and pelvic peritonitis. In two of ten cases there was slight œdematous swelling of the cellular tissue in the broad ligaments, just beneath the spot at which an inflamed tube had rested; in the remainder the most careful examination failed to detect the slightest induration or swelling in any part of the cellular tissue that lay about the uterus or between the layers of the broad ligaments.

Dr. N. C. Coe (*Exaggerated Importance of Minor Pelvic Inflammations*) says: "Of half a dozen fatal cases of hysterotrachelorrhaphy and incision of the cervix in which I enjoyed the rare opportunity of studying carefully the sequence, in every instance the cause of death was acute diffuse peritonitis." In regard to the more chronic cases to which circumscribed areas of inflammatory exudations were found, he states that "peritonitis is certainly the most prominent element in most of these cases, so far as the post-mortem appearances afford any light;" and again, "By far the greatest number of these indurations are situated high up in the broad ligaments and consist of cicatricial masses, mostly confined to the peritoneum of tubes and ovaries surrounded by old adhesions, or occasionally an imprisoned knuckle of intestine. I confess that I have rarely (perhaps half a dozen times) found such thickening in the cadaver which could be inferred to a pure and straightforward cellulitis, and this, too, when I have recognized by the vaginal touch (before and after death) what seemed to be an induration, a distinct band extending outward from a deep laceration of the cervix, or a condition of tension in or above one lateral cul-de-sac, which did not exist on the opposite side."

Joseph Price, who has been in the abdominal cavity oftener than any other American surgeon, says: "The operative gynæcologist does not find any pelvic cellulitis." Lawson Tait is equally emphatic on this subject.

Having established that cellulitis is a rare disease, at least outside of the puerperium, and that what we used to regard as such is in reality, in the large majority of cases, a pelvic peritonitis from the outset, we will now briefly inquire into the etiology of the latter. A diseased tube is usually the focus from which the peritoneal infection starts. Disease of the appendages may have preceded the attack of peritonitis for weeks or months when a leaky tube may precipitate a peritonitis, that is, the secretion pent up in the tube may discharge through the abdominal orifice of the tube into the peritoneal cavity, as the result of hyperdistension, trauma, violent exertion, etc. Or the tubal disease may arise acutely, and extend at once to the peritoneum, the most common causes in producing inflammation of the uterine adnexa puerpual infection, gonorrhœa, extension of an endomitritis to the tubal mucous membrane, a catching cold, especially during menstruation, etc. Unskillful intra-uterine treatment, minor operations about the cervix, such as Emmet's operation, dilatation, etc, especially if done without the strictest antiseptic precautions, are frequently followed by salpingitis and subsequently peritonitis; the introduction of an unclean sound, especially if it produce a lesion to the mucous or muscular surface of the uterus frequently results in pelvic inflammation. The symptoms of pelvic peritonitis vary considerably in intensity. While often so mild as to escape our attention, its onset may, especially if due to a leaky pus-tube, be so sudden, severe, and violent as to resemble a peritonitis following perforation. The disease is usually ushered in by a chill, fever, more or less severe pains in the lower part of the abdomen, back, and thighs; irritability of the bladder, sometimes rectal tenesmus. The hypogastric region is tender on pressure and vaginal examination very painful. Within forty-eight hours a swelling may be noticed on bi-manual examination, which, in a few days, may reach to the umbilicus. It is, at first, soft, baggy, almost fluctuating, but gradually becomes firmer until it often appears as hard as a board.

Under rest, opiates to relieve suffering, hot fomentations, and, after the febrile symptoms have subsided, the iodides, internally, and tonics, and the local application of iodine over the abdomen and to the vaginal vault, hot douches, glycerine tampons, iodoform, ichthyol, etc., the exudation gradually decreases, until after a few weeks or months it has become imperceptible. The patient's appetite has improved, her pains have lessened or disappeared entirely, she is gaining flesh, and regards herself as cured. The inflammation, however, does not always run such a smooth course. Instead of ending in resolution it may go on to suppuration. Abscesses

form and may discharge through vagina, rectum, bladder, abdominal walls, or intestines. They may then heal spontaneously, very rapidly, or they may continue to discharge indefinitely, until the patient dies from exhaustion or sepsis, unless surgical measures are adopted. Even if the disease ends in resolution, this does not always mean cure. On the contrary, it is often followed by a life of misery and suffering. When the patient returns to her ordinary duties she finds she is unable to fulfill them. She has aching in her back, abdominal pains, increased on slight exertion, disturbance of her gastric functions, and other reflex symptoms. Her menses are more profuse than formerly and more painful, marital relations are accompanied with suffering or may have become utterly unbearable; in that she presents the picture only too familiar to every physician practicing in gynæcology. Examination reveals extreme tenderness over one or both uterine adnexa; perhaps some thickening in the region of tube and ovary, or you may find large masses in the region of tube and ovary and filling up Douglas' pouch. In other words, while all active peritoneal inflammation may have subsided, the focus of the disease, the diseased appendages have remained and wait only a favorable opportunity to light up another acute pelvic peritonitis. I have seen three and four such attacks within one year. Such cases will probably go on from bad to worse until these diseased appendages are removed.

For the sake of convenience the results of pelvic inflammation may be tabulated in five groups.

1. Complete resolution and recovery. Such cases are restored to perfect health and are able to bear children.

2. Adhesions about ovaries and tubes which, however, do not affect the general health of the patient, but are frequently associated with sterility.

3. Recovery with a catarrhal salpingitis and possibly oöphoritis, which, under proper but often prolonged treatment, improve and often get perfectly well.

4. Includes cases of old and obstinate forms of salpingitis, hydrosalpinx and oöphoritis, who pass from one physician to another, or from one quack to another, and are doomed to permanent invalidism, unless relieved by the removal of the diseased organs.

5. And last are principally the victims of grave puerperal affection or gonorrhœa, suffering from pyosalpinx and ovarian abscess, which are certainly threatening their lives and are only curable by laparotomy.

In concluding this rather lengthy paper I make no claims to originality or thoroughness in treating this important subject. I am well aware that it is merely a fragmentary exposition of the subject presented. Many points that seemed of particular importance to me have been dealt upon rather in detail, while others, undoubtedly appearing equally or more important to some of you, I have only touched upon. Any omissions in this paper will, without doubt, be supplied in the discussion, which, I hope, will be full and exhaustive. (*For discussion, see Society Reports.*)

GUMMA OF THE IRIS.

BY FLORENCE MAYS, M. D.,
PHILADELPHIA.

Through the courtesy of Dr. Edward Jackson, Surgeon to Will's Eye Hospital, I report the following case, which is of interest, combining as it does so many ocular conditions, the results of syphilis, viz., iritis gumma of iris, hypopyon, keratitis punctata and papillitis:

F. C——, aged 19 years, came to Dr. Jackson's Clinic, Will's Eye Hospital, June 27, 1891, saying that his left eye had been inflamed and painful for three weeks. His right eye had been sore one month before. The following specific history was elicited: He had had an initial lesion six months before, one month after exposure. The secondary symptoms, such as glandular enlargements and mucous patches of mouth and fauces followed. At this time the patient was suffering from acute coryza. Said that he caught cold one week before. As he had been taking no medicine the coryza could not be attributed to the effect of potassium iodide.

O. D. Sub-acute hyperæmia of reflected and tarcal conjunctiva. Pupil, 4 mm. in diameter and normal. Globe, normal. V = $\frac{5}{viii}$.

O. S. Intense inflammation of tarsal and reflected conjunctiva, extending up to cornea with marked pericorneal zone. Moderate-sized ulcer on conjunctiva between inner canthus and cornea. Cornea hazy. Anterior chamber deepened with hypopyon below. A yellowish gumma 6 x 4 mm. in diameter, with vessels upon it, upon the upper nasal quadrant of iris. Gumma somewhat wider than iris and extending well forward. Pupil irregularly oval, long axis 30°. Iris yellowish-green. Iris of O. D., gray hazle. V= perception of moving fingers four inches from the eye.

Ophthalmoscopic examination: O. D. Low H. Disc reddened and swollen. Disc

margins almost entirely obscured. Arterial sheaths marked beyond disc.

O. S. Very indistinct fundus reflex. Punctate opacities marked in lower part of cornea.

The patient was ordered calomel gr. ¼ t.d. by the mouth, and one drop of four grain solution of sulphate of atropine in O. S. t.d. He was also directed to use hot compresses.

Five days later, July 2, the patient returned improved and was given protiodide of mercury, gr. ⅓ t. d., in place of the calomel, and told to gradually increase the dose.

July 7, he was much improved, and was given a solution of sulphate of hyoscyamine for the purpose of determining the refraction of O. D.

July 9. C. Hyos. O. D. V = $\frac{5}{vii}$ + 0.50 D. Sph ⌒ + 0.25 cy. ax. 90° = $\frac{5}{v}$.

July 16. Patient was taking five grains of protiodide of mercury daily. Gumma entirely absorbed. Coloboma of iris at former seat of gumma. Pupil key-hole and semi-dilated. Pericorneal zone still present.

The patient ceased to visit the clinic at this time, so no further opportunity for the study of the case was afforded.

414 W. Huntingdon St.

THE ACTION OF OREXIN ON THE STOMACH.

Dr. W. Brunner, in *Gazette Lekarska*, March 14, 1891, gives his experience with the use of orexin and its action upon the stomach.

His experiments were made upon thirty persons (180 separate observations). The doses employed were 0.25 to 0.30 gramme, in pills or capsules, two or three times daily.

In four healthy persons pain in the epigastrimes and vomiting appeared after the second dose was taken.

In twelve neurasthenic and hysterical patients, with impaired mechanical action of the stomach, the appetite was increased in six; this did not last long, for upon stopping the use of the drug, the appetite became poorer than before, with pain in the stomach and severe ringing in the ears. In another group of ten cases (patients with consumption, rheumatism, and cardiac disease) the effect was also doubtful. In four cases of gastric diseases (one catarrh, two cancer, and one dilatation) the pain and vomiting were aggravated.

In view of these experiments, the author recommends that orexin be dropped entirely from the list of reliable medicinal remedies.

SOCIETY REPORTS.

ALLEGHENY COUNTY MEDICAL SOCIETY.

J. J. Green, M. D., President pro tem., in the Chair.

Scientific Meeting, November 17, 1891.

Dr. X. O. Werder read a paper on Peritonitis. (See page 173).

Dr. Baten: I do not think I can say anything new on the subject. The disease, however, is not so old as the reader would lead us to believe. The Italian physicians in the latter part of the seventeenth and the beginning of the eighteenth century were the first who gave some of the symptoms of the disease. They studied the disease and made the diagnosis of peritonitis. Cullen, in 1775, mentions the disease, but does not describe it. Gast said in 1809 that the symptoms of the disease had been truly known for only twenty years, so that we did not have a true history of peritonitis until 1789.

I have had two cases of the disease which he describes, that is, I suppose it would be classed under that disease, pelvic peritonitis. It requires a good deal of time to make out the disease. I remember in these two cases I attended—and I had a good diagnostician to see the cases with me—we were unable to make out the disease until nearly the end of the second or third week. One case, however, went on, and an abscess was formed and opened, and the pus let out and the patient recovered. In regard to the existence of these diseases, I have no doubt they exist a great deal more frequently than we have any idea of or even suspect, and a great many patients likely go on without any treatment whatever, or any successful treatment, and remain as invalids the remainder of their lives, if they do not come in contact with some one who can make out a proper diagnosis.

Dr. Macfarlane: I listened with a great deal of pleasure to the doctor's paper. Whilst septic peritonitis is more common than the majority of the profession appreciate, possibly owing to inability to diagnose it, I think very many medical men recognize trouble about the appendix, even though no tumor can be found in the region. I think sometimes the trouble is referred to the appendix, mistakenly. Still the matter is, of course

more or less common. About the location of the appendix, by the aid of McBurney's point, it was my pleasure to read quite a lengthy discussion upon the matter. It was pointed out by an anatmoist that the base of the appendix rotates upon two or three planes and never upon one point. Although I believe it does nothing more, McBurney's point will serve a purpose in attracting attention to the region more than has been done heretofore. I think the teaching of older medical men had a good deal to do with the mortality in these cases, for the very reason that they were thoroughly imbued with the idea that when you have disease of the intestine you are to place the intestine in a splint with opium, and while the patient is relieved from pain the mischief is going on there in spite of the opium. While laxatives may be abused, I think that very frequently, especially by the use of calomel, good could be done with them at the outset, and very many cases are cured with the use of purgatives and hot applications and rest in bed, whilst if the opium treatment is continued to any excess, just what you want to avoid, that is, the accumulation of fecal matter in and around the parts, will result disastrously.

Dr. Buchanan: One or two points I think might be dwelt on a little more at length than has been done this evening. I suppose it would be right to confine the discussion to the matter which has been presented by the gentleman who opened the discussion—the subject of appendicitis and pelvic peritonitis. These two subjects illustrate the advance which the gynæcologist has made in medicine. On the subject of appendicitis all medical men are pretty well versed; they do not require the services of a specialist to give them any information; whereas, when they come to examine the ovaries and tubes, many otherwise well-informed practitioners are all at sea. It is because they are not accustomed to the bi-manual method of examination; they are not in the habit of taking these parts between their fingers and finding out what they hold. In most cases of pericecal abscess operation is readily acceded to, while in many ovarian and tubal abscesses they frequently object to the opening of the abdomen for the removal of these abscesses, because they have no familiarity with the examinations necessary to demonstrate the condition.

In inflammation of the appendix, I believe that wherever there is a tumor to be demonstrated, there is always localized peritonitis and the cases can be grouped into three classes:

First, those in which the inflammatory collection is such as to give rise to a tumor which can be felt, and which goes on to resolution. These are the great majority of cases, and for that reason alone I think it would be unwise to treat all cases by abdominal section. Statistics given are to the effect that a very large percentage of cases get well with merely palliative treatment.

The second class of cases includes those in which the peritonitis goes on to the formation of a localized abscess. This abscess sometimes opens spontaneously, occasionally through the bowels; when an incision is required, it is often merely the opening of an abscess, the peritoneal cavity not being invaded.

The third class of cases comprises those where no local abscess is formed, but where the first peritonitis is a general peritonitis, and these are the unfortunate or fatal cases that Dr. Werder has spoken of, and he gives a reason for the difference; for one being localized and the other generalized peritonitis. The peritonitis has not had time to shut off the disturbing element and encapsulate it in an abscess. I will make a suggestion in these cases. It is not the element of time that makes the difference, but the nature of the material that excites the peritonitis. A perforation may be made and no streptococci or other virulent germs may have entered. In this case it is a non-septic peritonitis, therefore a local peritonitis; for the same reason that, in cases of gonorrhœal salpingitis, attacks of local peritonitis are common. The gonococcus may enter the peritoneal cavity, and it has been pretty well established that when it does enter that cavity it is not an extremely dangerous visitor. It sets up a localized peritonitis, and these are the attacks of localized peritonitis that prostitutes have. Entirely different is the course of the peritonitis which arises from the bursting of an abscess, the result of infection at the time of confinement. Here the most virulent germs enter the cavity and give rise to a general peritonitis which may result fatally in a few days, possibly in a few hours. As I said before, the different course of the peritonitis in second and third stages of appendicitis, may not be due to the element of time, but it may be in the nature of the exciting cause of the peritonitis.

Now the subject of inflammation of the fallopian tubes which frequently gives rise to what is commonly recognized as pelvic peritonitis, is a subject which, I believe, in this part of the country has not received sufficient attention. I have seen within the last couple of years a good many cases where abscesses of the ovaries and tubes

could be demonstrated easily, and where the operation has not been recommended to the patient by the attending physician, even though attention was strongly called to it. I recall one case where a patient with an ovarian abscess was treated for malaria by a gentleman who is considered in the front rank of the profession in this city, until the abscess broke through the vagina. Now, that could only have come through lack of examination. Another case was one of gonorrhœal salpingitis, followed by very severe local peritonitis, in which a mass could be distinguished very easily after the peritonitis had subsided. This patient is now under electric treatment. Her doctor comes every day, or second day, and applies the battery. This woman has been about one and one-half years undergoing this and similar treatment and has not had a well day. Another case was treated by a most excellent physician in this city, one who stands very high, which I never saw but once and then at his request. This patient had probably an abscess, certainly as large as my fist. This woman had been carrying this abscess, according to accounts, for about three years. She was an invalid as most of these cases are. It was pitiable to see her turn in bed. This gentleman had not advised or apparently thought of an operation. He was much pleased at her being a little better than she was a month before. Another case I saw about a year ago in a neighboring town. She had an abscess that could be distinctly felt by any person who put his hand on the abdomen. This patient had been constantly in bed for two years, and in that time had not touched her feet on the floor. She has since died. I mention these cases because I believe that many others of similar character now exist in this and neighboring communities, and that this matter is not sufficiently talked of by the profession here.

Dr. Lange: The subject of peritonitis has been limited to pelvic peritonitis and appendicitis. I am at work at the present time upon a paper reporting a series of twelve cases of typhlitis, part of the number that I have treated during my professional life, and of which I have accurate and full notes. I will publish these cases as I complete them. I must state I have never lost a case of typhlitis. I stand with the Germans in this respect, if, as the reader of this paper stated, the mortality in Germany is very much lighter than in America. Of these twelve cases of which I have notes, one only received surgical treatment, and that was a simple incision through the bell-wall for the evacuation of pus. Dr. Werder seems to support the statement that after a duration of three days, the inflammation—typhlitis—not showing any apparent improvement, a section would be indicated. It strikes me that this is entirely too energetic, that it is, to say the least, unwarranted. This is all right when pus has been demonstrated. Otherwise it is not warranted, because we still sometimes have septic peritonitis after abdominal section with the most careful precaution by the most careful operator. In other words, antisepsis is not yet thoroughly understood nor mastered. As long as this is true, it is unwarranted to advocate incision in typhlitis because it does not improve after an existence of three days. The reason is not sufficient. It must still be the demonstration of pus. It is justifiable, however, to dilate the sphincters, enter the hand into the rectum and search for pus, because it forms frequently *behind* the cæcum, and when so, cannot be found by examination through the belly-wall.

Among the twelve cases I shall report is one in which the tumor was as large as a melon, where, upon careful and repeated examinations, no pus could ever be found. A deformity lasting almost two months after recovery existed by reason of extreme flexion of the thigh upon the abdomen during the inflammation, and the whole limb was infiltrated and œdematous from vein-pressure, and before the leg could be brought down and the tumor disappeared, had a duration of between three and four months. The recovery is perfect. I think I have a right to assume that no pus existed in that case, and I would, with all due regard for the opinion of the authority quoted by Dr. Werder and of Dr. Werder himself, insist that this rule is unjustifiable. The criterion, I think, must be the demonstration of the existence of pus. The treatment of general peritonitis has undergone some change. The change advocated in the last few years is the administration of purgatives, particularly the sulphate of magnesium instead of opium. I believe that general septic peritonitis is always fatal, and I believe we often speak of general septic peritonitis where it does not exist, as for instance: I was recently concerned in a case where an abdominal section was done, and on the third day it was concluded that the patient had general septic peritonitis. She was given, at my earnest solicitation, morphine. The sulphate of magnesium treatment was ruled out by my insistance, and she recovered. I was doubtful of it at the time, and now I do not believe she had septic peritonitis. One case of septic

peritonitis I remember very distinctly, occurred five or six years ago. A patient came to my office in the middle of the night out of breath, said his neighbor was very sick, and took me to his bedside. I went with this man for a distance of three blocks, and found the patient with an extremely bad case of cholera morbus. I gave him morphine, remained with him about half an hour, and when he was better, the wife of the messenger came to me, and said: "Doctor, my husband has the same thing." I went into the adjoining house, and found this patient with apparently a very severe attack of cholera morbus; but it was septic general peritonitis, and killed him in forty-eight hours. Here were two cases occurring at the same time and side by side, and, though I may lack special acuteness, I could see no difference between them. It was impossible for me to say that one had a certainly fatal affection and the other a temporary slight illness without any mortality. This was true until the effects of morphine decided one to be cholera morbus. Both were chilled, both were shocked, both were very tender and tympanitic, both drew up their legs, both were cold and blue and almost pulseless, and both had death in their faces. Both also vomited and purged, and both were evidently in unutterable anguish. I could appreciate no difference between them. From this and like evidence, I believe a diagnosis of general septic peritonitis is not always correct; and further, that when such a patient has recovered under the magnesium treatment, no general peritonitis existed. I am told by a laparotomist of large experience that most of his women on the third or fourth day have such an attack; that he gives them magnesium and they get well. But this is certainly not general septic peritonitis. I believe it is a colic with meteorism from handling or exposing the bowels; a condition analogous to that frequently seen after hard protracted labor, and in such cases the magnesium treatment is excellent. But in my opinion, a patient with septic peritonitis dies. There are two ways, generally, by which septic inflammatory agents reach the peritoneum: by ulceration through the stomach or intestinal tract, and in women from the genitalia. The messenger for the cholera morbus man probably had some ulcer of the bowels, perhaps painless, with a perforation which happened through his violent run to my office that night. No *post mortem* was had. One thing that appears from Dr. Werder's paper and the discussion is that no one mentioned idiopathic peritonitis. I believe there is no such peritonitis. The messenger of whom I spoke was seen by other physicians, and the conclusion was that he died of idiopathic peritonitis. But this was many years ago, and, barring puerperal and traumatic inflammations of the peritoneum, all others were idiopathic. We know better now. As to the treatment of this septic inflammation of the peritoneum, if there be a chance to benefit patients, I believe it to be by opium, and very slight. Dr. Andrew Clark, as all the world knows, was a very eminent physician, and he reported a number of cases of acute general peritonitis cured by the opium treatment. I do not know whether that is correct. It possibly is, but from what I have seen, I must doubt it. As to what I have seen of magnesium treatment in cases where the diagnosis was certain, I must condemn it. Can you do anything else when you think of typhoid or duodenal or gastric ulcer perforation? I believe the prognosis to be always extremely bad, and the only forlorn hope to be opening the belly and washing it out.

Dr. Macfarlane also objects to the opium treatment, to "putting the bowels in splints" in perityphlitis. I have here twelve cases of such peritoneal inflammation, all of which recovered and all of which were so treated. I have had additional cases of which I have no record, which were treated and which ended in the same manner. Therefore I shall continue so to treat them. But I do not use morphine alone; I do not trust to morphine alone. I use also calomel. We were wont to say for its alterative effects, now we give it for its antiseptic and antiplastic effects.

Dr. Kœnig: It seems to me Dr. Lange must have misunderstood Dr. Werder in regard to at least one assertion. He said Dr. Werder had not mentioned idiopathic peritonitis. If I am not mistaken, Dr. Werder declared that peritonitis might be produced as a result of "catching cold" at the time of the catamenial period. If that means anything else than idiopathic peritonitis, I fail to understand it. The term "catching cold," to my mind, is simply an admission of ignorance. I wish also to add the weight of my testimony in favor of the opium treatment. We want to relieve the nervous system of the irritation that the disease produces, and we can do it better by opium than by any other remedy. The late Professor Austin Flint was sometimes jestingly accused of having reduced his medication to the use of two drugs, whisky and opium, and I well remember his remarks regarding opium. In serious diseases, he admitted, it was not curative under the ordinary acceptation of that term, but he declared that

it was curative nevertheless, for the reason that it established a tolerance of the disease for the time being, allowing nature to repair the trouble under the reduced sensibility of the nervous system.

Dr. Grube: I can recall two cases which I think illustrate the fact that no one line of treatment can be laid down. Each case must be treated on its own merits. One case was of peritonitis which went along for some two weeks or more, until I was satisfied there was pus present. I demonstrated the presence of pus by the hypodermic needle, and then I operated. It was a very simple operation. I merely cut down through the muscles of the abdominal wall and met the abscess cavity, and, instead of cutting into it, I took the forceps and stretched it, and the pus came out, and that was the extent of the operation. Any physician can do that.

The next case was very much like it, and I thought I would have another opportunity for operation, for I had some of the surgical enthusiasm. I watched the case, and in about a week the whole thing disappeared without any pus at all. My idea of the treatment of all these cases is as Dr. Lange said. The time for operation is when you can demonstrate the presence of pus, and not until such time, with the exception of the cases where you have collapse, and if they are not operated on quickly, you have no chance of saving your patient. My own experience has been that each case has to be watched carefully. What is necessary in the case is simply opening the abscess, or else we will kill our patients very quickly.

Dr. McKibbon: The gentleman on my left has stated the history of two cases that he had. Dr. Senn, of Milwaukee, has given the history of the cases he treated. He claims the operation done in this condition is practically of very slight importance, and on the other hand, that by waiting for these cases to become bad is the worst treatment that can be pursued. He says the operation is not of sufficient magnitude to wait until there is something turning up.

Dr. Buchanan: I would like to express myself against making a fixed time for operation. I think, with Dr. Lange, that to fix absolutely on the third day as the time to operate if the patient is not improving, is rather arbitrary. I could submit a number of cases that got well without an operation. I have seen many cases that did badly for three days and eventually recovered without early interference. I think Dr. Lange has been wonderfully fortunate in the class of cases he has had, if he has had twelve consecutive recoveries. One of his cases would have been much better with an operation. I think very few of us would be willing to let such a mass go on, even to the size of a *small* melon, without opening it up and endeavoring to do away with the origin of this immense inflammatory exudate. I think there was pus in this case. According to the history given, this patient did not make a very pleasing recovery. I think Dr. Grube has very well stated the two classes of cases that should be submitted to operation, those in which pus can be demonstrated and those in which the perforation is through the appendix, and is setting up general peritonitis. If you can catch such cases in time, it is proper to remove the appendix and wash out the cavity. Usually they die.

Now, in repard to septic peritonitis. As I understand Dr. Lange, he makes the test of septic peritonitis the death of the patient. If he dies it was septic peritonitis, and if he recovers it was not septic peritonitis. I do not think this a fair way to test the method of treatment for that disease. If I had septic peritonitis, I would like to have some very vigorous treatment with epsom salts at first, and if that did not succeed very soon, I would be willing to take very large doses of opium.

The case which has been cited, in which marked improvement took place, which was supposed at first to be septic peritonitis and recovery occurred in three days, it seems to me, from the description of the symptoms, was one of beginning septic peritonitis. I think very likely if the operations of this gentlemen were all followed on the third or fourth day by the symptoms described by Dr. Lange, it was the result of septic conditions. It has been remarked that Dr. Sands always advocated the removal of the appendix. This is certainly proper in case you can find it, but you can not always get it. It is a nice thing to remove and a safe thing to remove; at the same time I do not think it is a very good thing to hunt for it. There is a great deal of change taking place in the surrounding parts which render it difficult to find. The rule that operations should be made parallel with and a short distance above Poupart's ligament is a very good rule, except in those cases where the abscess does not approach the ligament. There is a class of cases where the localized peritonitis occurs opposite the umbilicus or a little lower.

Dr. Lange: I do not set myself up as a judge concerning the case Dr. Buchanan has reference to, but merely submit my opinion.

I think the doctor will agree with me that if my associate in the case was correct when he said that nearly all his patients had such symptoms on the third or fourth day, that it was not septic peritonitis, because if all his patients had septic peritonitis and all got well, that gives a grand and new aspect to the whole matter. I did not believe at the time that it was septic peritonitis; recovery confirms that belief. I am entirely willing to put myself on record that when this inflammation does not kill, it is not septic and not general; in other words, that septic general peritonitis is fatal, despite opium, calomel, magnesium, or any drug that may be given; that when such a case ends in recovery it involves an error of diagnosis. Another point, the operation of opening an abscess, which I did in one of my twelve cases, is quite a different thing from opening the cavity on the third day of perityphlitis. There may be no pus-sac, no pus cavity; if not you will get into the general peritoneal cavity, easy enough in any event; if you do not, if you content yourself with cutting down to the tumor adherent all around, and do not free it, and palpate and examine it, you have accomplished nothing. Doing this thoroughly, all the chances are you will get in; and if you do not, and there is no pus, what have you accomplished? Nothing. The criterion still must be, pus or no pus.

Dr. Green: I want to say one word in regard to trying to make the distinction between septic and non-septic peritonitis. It seems to me in nearly all cases it can be detected by the general symptoms of the patient. I think the best guide is the condition of the patient. That is the general condition, and the general aspect of the patient. If the disease is of a bad nature, the patient will readily succumb. These are the symptoms I have allowed to guide me in all such cases, and I think no physician ought to find any trouble in distinguishing, after twenty-four hours, what kind of a case of peritonitis he is dealing with. I think twenty-four hours will determine the case, thirty-six hours at the utmost.

Dr. Werder: I am thankful for your kind consideration of my paper and also for the discussion of the subject. I have very few remarks to make, because the matter has been discussed so thoroughly that there is not much to be said. Only a few points I would mention. The first is in regard to McBurney's point. I have very little experience with it. Of course the appendix is a very movable organ, but Dr. Macfarlane claims that if you put the end of your finger at the point he claims as diagnostic, that that point touches the base of the vermiform appendix, and the base of it is always located in the same place unless the cæcum is displaced. It may be so, but if so, the displacement is very common. I know Dr. Clark claimed great results for the opium treatment. He gave opium simply according to effect only. If I am not mistaken he gave what are usually considered enormous doses, reducing the respirations in some cases to 10 or 12 per minute. Of course these are enormous doses. I think no one to-day gives those enormous doses, and I know our results are no worse than Dr. Clark's were. I prefer the calomel treatment. If I had peritonitis I would not want to suffer very much pain, I would want a dose of morphine, but as a routine treatment, I think I would prefer the purgative treatment. When opium is given the bowels confine the fecal matter, which contains septic germs, and some of these cannot help getting into the general abdominal cavity. Septic peritonitis has often been produced by an accumulation of fecal matter which could not be passed. Often cases of peritonitis are due to germs getting into the abdominal cavity through the bowels. Now purgation will carry that off.

Dr. Buchanan speaks of perforation of the vermiform appendix not always causing peritonitis, because it depended a good deal on the matter contained in the bowel, which then reaches the peritonal cavity. If it contained very malignant germs it would cause septic peritonitis. I believe that any perforation anywhere in the intestines or stomach, any perforation in the general peritoneal cavity, will produuce septic peritonitis very suddenly and rapidly. Dr. Lange spoke of twelve cases of peritonitis which he treated, all of which recovered. That is certainly very fortunate, and it is doubtful if his next twelve cases will be as fortunate. He may have a streak of bad luck in the treatment of these cases. I am certain a case of the kind of which I reported the post mortem will die, no matter under what treatmentt, and die very suddenly, unless something surgical is done at once. The difficulty is in deciding when to operate and whether to operate, and the difficulty is to ascertain the exact condition of the tumor. If there were any special indications to determine the conditions inside, then we would know exactly what to do. The case may look favorable, and at the same time a fatal accident is already present, and unless we operate early in such cases our results will be very bad.

If you wait three days, in some cases, the patient may be dead, but to say you must operate on the third day, is perhaps too arbitrary; on the other hand, the second day is very often too late. There are cases in which, if you want to give the patient any chance for life, you must operate the first day, as soon as you see the case, but the difficulty is, to tell that a case requires operation at once, and until we can make a more certain diagnosis, I think the surgeon is perfectly justified on the third or fourth day, if the patient is in a very dangerous condition, to remove the diseased appendix or abscess or pus. I think if he does that on the third or fourth day he will have a very small mortality. If he waits until the last day, then his mortality will probably be 100 per cent.; that is, if he waits, as one gentlemen here advised, until perforation or collapse sets in, there is no justification for operation and he need worry the family and patient no more. It is too late to operate. The gentleman also mentioned that pus should be demonstrated. If immediately under the abdominal wall, it is an easy thing to do, and in a case of that kind, puncture is hardly necessary. You can feel quite distinctly if pus is under the abdominal wall. If the pus is back of the cæcum and you run a needle into it and withdraw one, two or three drops of septic pus and smear it upon the the healthy peritoneum you can hardly help producing general septic peritonitis. I confess I lack courage to punch a needle back into the abdominal cavity, if I suspected pus. Dr. Lange also advises exploration through the rectum to find pus. That has been recommended by quite a number of persons, and it is practiced to a great extent, but we are to remember that these abscesses are frequently so very small that they may contain only a drachm or one or two ounces of pus, and even if you push your whole hand into the rectum, if the abscess contains only a drachm or two of pus, you would not be able to recognize it by palpation, and yet a drachm or two of pus, when it gets into the abdominal cavity, will be sufficient to cause death in twenty-four hours. Dr. Green speaks of the diagnosis of septic peritonitis by the general symptoms, pulse, expression, temperature, etc. He says septic peritonitis is not very difficult to diagnose and that every physician ought to have very little difficulty in making a diagnosis of simple from septic peritonitis. Probably in a majority of cases that is quite true, but many cases of septic peritonitis present very few symptoms and do not appear to be very sick patients at all. They may have no elevation of temperature; perhaps the only unfavorable sign you may notice in some of these cases is the very feeble pulse. I think this the most important diagnostic symptom in peritonitis, no matter whether the temperature is low or not. I do not think temperature has very much to do with the diagnosis, but a very rapid, feeble pulse and a lack of normal breathing, these are the most important symptoms and the most dangerous symptoms. Pains and temperature are not very important diagnostic points. Dr. Lange spoke of a case of cholera morbus and septic peritonitis, in which it was impossible to say, when he saw the cases, which of the two was the sicker man. The case in which I saw the post mortem examination began exactly like a case of cholera morbus. Violent vomiting, intense pains, and death in three days. He had a perforation of the appendix, perforation of the cæcum and pus all over the abdominal cavity. I suspect Dr. Lange's case to have been one of a similar kind.

Report of cases followed:—

Dr. Buchanan: Five years ago I saw a case of croup in which it was necessary to introduce a tube. I opened the child's windpipe and put in a black rubber tube. The child was two years old and in three or four days, if I recollect correctly, I removed the tube, but the child had so much difficulty in breathing that I replaced it and left it in until the expiration of a week. I again removed the tube, and again this hard breathing came on. Some time after that I removed the tube and succeeded in keeping it out for two or three hours. At the end of that time the hole had become so very small that it was with the greatest difficulty I succeeded in getting it back before the child strangled. At intervals afterwards I removed that tube, and I at one time started to shorten it, and I thought if I would replace it each time with a shorter one I would, at length, have no tube at all, but when I got down to a certain degree of shortness I found the child could not breathe. I sometimes did not see the child for six months or a year. I was called to see the child about a month ago, and found that he had spasmodic croup, and also, to all appearances, there was no air coming through the tube. I endeavored to extract the tube and found the granulations had grown down in the opening, and when I pulled it up these points of tissue acted as a hook to hold the tube in place. I allowed the tube to remain, feeling convinced the child would get over this attack of croup. I saw him incidentally last Sunday and then withdrew the tube as far as possible and clipped this point off and extracted the tube. This point was about

one-third or one-quarter of an inch long and as thick as a pen-holder. It was very tough tissue, covered with epithelium. The child since that time has been perfectly healthful. I mentioned this case about two or three years ago before this society, and I merely report the case now as closed. I would state that I saw this child this evening incidentally, and I believe the aperture is entirely closed, from the examination I made merely with my fingers, in endeavoring to open the parts up, and I believe the aperture has grown together. It now has been two and one-half days since the tube was taken out.

DR MACFARLANE: I saw Dr. McCann do this operation about fourteen years ago on a child named Murdock. He was two years of age, and had diphtheritic croup. The child got well, and when an attempt was made to take out the tube he was immediately seized with suffocation, and we were obliged to replace it as quickly as possible. That was a silver tube. One day when we had removed the tube, which had been in some time, the outer shell was corroded and all eaten away, and there was nothing left but a very small portion of the inner shell. It was replaced by a rubber instrument, and it remained in the parts for a number of years. The rubber tube remained in, to my knowledge, until a year ago. On one occasion the boy had gone into the water and had waded in till this aperture was under; he was then sixteen years of age. He immediately became suffocated, and had it not been for his brother, who came to his rescue, he would have succumbed.

COCAINE IN PERITONITIS.

Dr. Julius G. Kiefer states, in the *Kansas City Medical Index*, that the distressing pain and vomiting of peritonitis may be promptly checked by a suppository containing one grain each: extract of opium, cocaine hydrochlorate, and iodoform. It will be safe to use one suppository per rectum four hours apart, if the patient is closely watched for toxic effects, which may be noted by cold extremities and enfeebled heart action. I was led to the employment of the above on the theory of the malignancy of the affection and reversed peristaltic action of the bowel in peritonitis, and the well-known anæsthetic properties of cocaine on serous membranes. Alimentation should be temporarily suspended, and enema must be avoided until vomiting is checked.

Any discussion will be thankfully received.

SELECTED FORMULÆ.

OTALGIA.

The following is recommended (*Ugeskhift for Laeger*, Nos. 28 and 29, 1891) in otalgia:

℞ Chloral camphor.....grammes 5.
Glycerini..... " 30.
Ol. amygdalar. dulc..... " 10.

Dip a wad of cotton into the mixture and place it in the ear.

RINGWORM.

℞ Cupri oleate.....3ss.
Adipis benzoati.....3i.
M. Fiat unguent. Sig Use locally.

—*Shoemaker.*

MALARIA.

Sulphate of quinine.....grammes 12.
Sulphate of iron..... " 6.
Soft extract of cinchona..... " 15.

For ten pills, one every three hours; exercise in the open air; suitable nourishment. Paint with tincture of iodine the hepatic or splenic region.

FOR ASTHMA.

A medical friend advises the following formula, which I have found useful. I do not remember to have seen it in the text-books:

℞ Pot. iodidii.....3ij.
Fld. ext grindelia robusta.....3ij.
Fld. ext. belladonna.....gr. xxv.
Tr. gelsemium.....gr. xl.
Aquæ.....3j.
Elix. simpl.....ad 3vj.

M. Sig. One and a half teaspoonfuls every two or three hours until three doses are taken. Usually by the time the third dose is taken the tightness of breathing is gone.

—C. S. Gray, M. D., Little Rock, in *Jour. State Med. Society of Arkansas.*

HÆMORRHOIDS.

The following (*Il Raccoglitore Medico*, No. 16, 1891) is employed:

℞ Cocain. mur.....gramme 1.
Morph. sulph..... " 0.25.
Atropin. sulph..... " 0.20.
Tannin polocrizat..... " 1.
Vaselin.....grammes 36.

Mix well and carefully. Apply locally once or twice daily, and especially after an evacuation.

BICHROMATE OF POTASH IN HÆMATO-CHYLURIA.

Dr. Manuel Delfin (*Cronica medico-quirurgica de la Habana*, Tomo XVII, No. 17) has used the bichromate of potash with success in several cases of hæmato-chyluria. He used the following formula:

℞ Potassii bichromat.....cgms. 5.
Aquæ destillatæ.....grammes 250.

A teaspoonful on rising and at meal times.

The writer has no good theoretical reason for having used the remedy, but feels assured that in potassium bichromate we have a means of modifying that terrible disease, so difficult to successfully treat.

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LEADING ARTICLE.

THE TREATMENT OF PHTHISICAL COUGH.

The cough in phthisis is perhaps the most troublesome of all the symptoms we are called upon to treat. It cannot be said that all of the brilliant researches which have lately been made respecting the etiology and treatment of this disease have advanced our knowledge regarding the management of this distressing symptom. We must still rely upon only clinical experience, and until the rational treatment recently proposed has shown itself of positive value, the symptomatic treatment will remain of chief practical value to practitioners of medicine. In nearly every case of consumption this symptom cough calls for treatment, and it is very often one of the gravest questions possible how it shall be properly dealt with. Not only is it troublesome, annoying, and painful to the patient, but it causes vomiting, loss of sleep, hæmoptysis, pneumothorax and exhaustion when it is violent and prolonged. For practical purposes the cough in phthisis may be divided into two kinds: (1) ineffectual and feeble; (2) excessive. The very feeble, ineffectual cough is always a grave symptom when occurring in the later stages of consumption and associated with exhaustion and general debility.

J. Mitchell Bruce, M.A., M.D. L. R. C. P., who, from his large experience as a physician to Charing Cross Hospital, and to the Hospital for Consumption, Brompton, is entitled to his high reputation as a teacher, has delivered an excellent lecture upon this important subject (International Clinics, April, 1891, p. 43), in which he discusses the treatment of cough, under headings referring to the time of its occurrence, as follows:

(1) "Cough in the evening; (2) cough at bed-time; (3) cough during the night; (4) cough on waking, stirring, rising and dressing in the morning; (5) cough after meals; (6) excessive coughing any time, with or without abundant expectoration."

This division seems a practical and rational manner of discussing the subject, and as a

guide to the cause of the cough it commands itself as a routine method of thought. Cough in the evening may be due to the fatigue of the day and its consequent exhaustion, to over-heated rooms, tobacco smoke, bad air, or over-exertion on the part of the patient. The results are, as Bruce says, three-fold: "(1) Exhaustion; (2) rise of temperature; (3) cough." To prevent these and their bad effects upon the night's rest, the rational treatment of this symptom is to order such cases to retire early. Similarly, when cough at bedtime is a marked feature of any phthisical case it can very often be traced to sudden change of temperature, over-strain (going upstairs), etc., etc., and the most effective treatment will consist in the regulation of these bad conditions, and the strict avoidance of any of the causes which have been found to start the coughing. Should all the care possible in getting the patient upstairs and to bed fail to prevent the attack, Bruce recommends the giving of a few drops of the spirits of chloroform combined with a little lemon juice and simple mucilage, and if this fails, a small amount of morphine.

In cough occurring during the night, which is usually due to an accumulation of secretion, reflex irritability of the nervous system from fever and general exhaustion, he directs the use of warm food and stimulants, and that morphine should be withheld unless simple measures prove powerless to arrest the prolonged and useless attack; while for morning cough the indications are to refresh the system, to assist expectoration and to avoid all narcotics. These should be met by an early breakfast, hot drinks, or nourishing broths, which, by stimulating the strength and increasing the secretions, assist expectoration.

In dealing with "cough after meal" Bruce confesses that for such paroxsyms the only therapeutic indication is "to arrest the unhappy symptoms, an indication far too general to be of much service in the selection of a remedy." Cough at this time is very commonly attended by vomiting, and so nutrition rapidly fails. The main thing is to avoid large or habitual doses of narcotic sedatives, which very soon have a disastrous effect on the digestive functions, and sohasten the end.

Finally, Bruce discusses the control of violent cough occurring at any time, and advises the use of the following local measures, viz.: Swallowing of pounded ice, menthol inhalations, warm alum spray, morphine insufflations with double the quantity of powdered starch, inhalation of a few drops of chloroform on lint.

For "obstinate cough" Dr. Roland G. Curtin, of Philadelphia, who may justly be considered an American authority upon diseases of the chest, has brought to the notice of the profession the oil of sandalwood (Phila. Hosp. Reports, Vol. 1, 1890). Dr. Curtin thus summarizes his experience with this remedy in the wards of the Philadelphia Hospital and in private practice.

"In the first stage of phthisis the remedy acted in a very satisfactory manner, giving comfort and great relief to the patients when the cough was very troublesome. Sleep was prolonged and less disturbed and appetite was improved. In the second and third stages of phthisis, where the medicine was well received by the stomach, it added greatly to the comfort of the patient, greatly relieving the strain of coughing.

"In the cough of catarrhal pneumonia, it not only acted as an immediate quietant of the cough, but also in a number of cases it seemed to have a curative effect, the improvement being prompt and very decided. The profuse tenacious secretion was changed by liquefying it, which relieved the distressing symptoms, and it was finally diminished in quantity."

Dr. Curtin's claims regarding the value of sandalwood oil in the treatment of phthisical cough are based upon its local and general effects, as known to the profession all over the world in the treatment of urethritis, and the advantages which he points out from its use in preference to opiates are the immediate relief usually afforded, no impairment of appetite, unless it disagrees with the stomach (as it sometimes does), no constipating tendency, nor does the dose have to be increased after a while.

But the cough of phthisis is one which can never be treated by a set formula; each case must be dealt with according to the circumstances present. The value of hygienic measures cannot be over estimated, and the use of simple and rational means to the exclusion, as much as possible, of opiates, should always be adopted. In the future, it may be, we shall annihilate cough by directly attacking the cause of phthisis, but in the mean time we are dependent upon what bedside experience has taught us.

BOOK REVIEWS.

MICROSCOPICAL DIAGNOSIS OF TUBERCULOSIS. By Paul Paquin, M. D., late Professor of Microscopy, Bacteriology, etc., and Director of the Laboratory of Pathology, Medical Department, Missouri University, etc. Published by The Little Blue Book Co., Battle Creek, Mich. 24mo., 48 pp.

This little hand book has evidently been prepared with a view of affording those inexperienced in the study of the bacilli of tuberculosis the proper data to enable them to do such work readily, especially to put the means in the hands of the general practitioner by which many severe cases of consumption can easily be diagnosed.

The author refers very succinctly to the microscope and other instruments employed in the study of this kind of bacteria; the principle, object, and effect of staining; mounting; collecting sputum, etc.; staining fluids and their use; and various other interesting matters.

There are three handsome colored lithograph plates of the bacilli, besides a number of wood-cuts. It will be found a very useful manual.

AN INTRODUCTION TO HUMAN PHYSIOLOGY. By Augustus Waller, M. D., Lecturer on Physiology at St. Mary's Hospital Medical School, London; late External Examiner at the Victoria University. London and New York: Longmans, Green & Co. 1891. 8vo., 612 pp., 292 illustrations.

This is, on the whole, the most satisfactory text-book that has been published since the first appearance of the now classical work of Dr. Foster. Dr. Waller's presentation of the subject is particularly notable because of its brevity, clearness of expression, excellent style, originality, and absence of anatomical and histological details. While the author has been brief, he has not neglected that which should be found in a book of this character; nor can it be said on this account that the text is a mere summary of physiological data. The matter is not only presented with remarkable clearness, but with such originality and excellence of style, that the whole work has a distinct air of freshness.

The book bears evidence that the author is a careful and clear thinker, a thorough physiologist, and conscientious worker. It contains very few errors and omissions, it is well printed, and excellently illustrated, and altogether most admirable, and will undoubtedly meet with immediate and great success.

CORRESPONDENCE.

ANTISEPTIC FOR THE GRIPPE.

To the Editor of the Medical and Surgical Reporter:—The best antiseptic for influenza, or La Grippe, is sulphite of sodium, 5 grains, every two hours till all pain leaves the system. My prescription is:—

℞ Sodii Sulphit.....3iv.
Aq æ.....f3vi.
M. S.—A teaspoonful in as much water every two hours till all pain is relieved and the patient is well.

Yours truly,
J. A. Monell, M. D.,
New York City.

GLYCERINE FOR BURNS.

M. Grigoresen, of Bucharest, highly recommends pure glycerine as a remedy for burns. On first application a slight burning feeling is experienced, which soon gives away to a local anæsthesia, somewhat resembling that produced by carbolic acid. In severe cases two or three applications should be made, so that the parts are kept wet constantly with the glycerine. Under this treatment the inflammation is subdued almost completely, and only a slight cicatrix is usually left.

TO HASTEN DESQUAMATION IN SCARLATINA.

Dr. Jamieson (*Norsk Mag. for Lægevidenskaben*, No. 11, 1891) has employed 30 per cent of carbolic acid in oil with good results, but resorcine has served him better. This latter is combined with salicylic acid and employed in the form of a superfatted soap. The patients are anointed with this when desquamation begins; after this the skin is rubbed with some indifferent fatty substance. The nurse should wear rubber gloves to protect her hands. With these means the writer has shortened the period of desquamation from 55.5 to 40.26 days.

PERISCOPE.

MEDICINE.

THE RELATION OF FUNCTIONAL DISORDERS OF THE HEART TO DISEASES OF THE ABDOMINAL VISCERA.

Dr. Taylor, in his most interesting paper, in *The Practitioner*, draws attention to the association of cardiac derangements with abdominal visceral diseases, and records fifteen cases met with during the last four years.

The cases are divided into two clinical groups:

1. Violent and frequent action of the heart (palpitation, tachycardia, or heart-hurry).

Three cases are recorded:

Case 1.—Lady, past middle age. Paroxysmal attacks of violent palpitation, 260 and more beats per minute. Attacks of sudden onset, and would cease suddenly. They were excited by sudden noise, as slamming of a door, or any mental emotion, and a similar event would arrest the heart's gallop and reduce its action to normal frequency. A movable right kidney subsequently detected. Death occurred. No autopsy.

Case 2.—Lady. Paroxysmal attacks of violent palpitation, beats amounting to 200 per minute, and with tendency to alarming syncope. Attacks brought on by puff of wind or any such like trivial occurrence, but would cease suddenly without apparent cause. Patient had arrived at menopause, had frequent attacks of uterine hæmorrhage, and was found to have large uterine tumor with marked retroversion of uterus. Death occurred during an attack. No autopsy.

Case 3.—Male, aged 62. Paroxysmal attacks of violent heart-beating, sudden in onset and terminating suddenly, and unaccompanied by sufficient dyspnœa to cause real distress. Patient had an enlarged prostate, and presented symptoms of chronic cystitis. He was in the habit of using a flexible catheter. Death occurred apparently from surgical kidney, but rapid action of heart continued to the end. No autopsy.

Dr. Taylor also refers to a case mentioned by Dr. Bristowe, where the pulse ran up to 198 in a case of relapse in enteric fever; and after drawing attention to another case, also reported by Dr. Bristowe, where "when lying down, she [the patient] could arrest or prevent the palpitation by placing a cushion or pad under her loins, so arranged as to cause the back to be strongly arched," he pertinently asks, "Had this patient a movable kidney?"

The writer suggests that in these cases "a peripheral irritation of sympathetic nerves to the kidney, or to the uterus, or to the prostate and bladder, may be extended to the centres higher up in the cerebro-spinal nervous system, and thence reflected to accelerator nerves supplying the cardiac muscles."

Against the hypothesis that "the several organs of the body are showing signs of degenerative changes, and amongst them the heart, which is the first to attract our attention by reason of the urgency of its symptoms," it is very properly pointed out that cases of tachycardia not infrequently occur in early life or in persons who present no evidence of tissue decay.

2. Cases in which there is intermission or a decreased action amounting to marked slowness of pulse (bradycardia) with a tendency to syncope.

Twelve cases of this group noted. Seven have died. No autopsy.

Two cases of adult males, after enteric fever, where heart rate sank below 50, in one as low as 46.

One female child, aged 15, also after enteric fever where pulse rate of 54 noted.

Five men with chronic bladder and prostate mischief. Patients had first sought surgical advice for the urinary troubles, and then subsequently after the lapse of a few weeks or months symptoms of cardiac failure appeared.

Three cases, two men in prime of life and a woman of 45, with chronic bowel trouble and dysentery.

One woman, pregnant four months, in whom there also existed some uterine tumor, probably fibromatous.

After pointing out the effect injuries to, and operations on the abdominal cavity, have in producing a slowing of the pulse, it is suggested that possibly "lesions of abdominal organs produce upon the whole of the sympathetic ramifications, an effect which is far reaching in its consequences and which so influences the cardiac nerve-mechanism as to produce diminished activity together with lessened tissue repair." Should this be granted, the irregularity and intermission of the heart's stroke can readily be explained.

THE NERVE-SUPPLY OF THE INTESTINE.

Dr. Eskridge has recorded a case which he believes illustrates the nerve-supply of the intestine in the region of the ileo-cæcal valve. The patient was a man of thirty-three, who met with an accident to his back, causing, as was afterwards found, fracture and dislocation of the twelfth dorsal vertebra. Although he was in great pain immediately after the accident, and his back was very severely injured, he rapidly improved until the sixth day, when, after eating freely of boiled cabbage, he became sick, had coffee-ground vomit, and rapidly sank and died. At the necropsy it was found that the lower portion of the ileum and upper part of the colon were enormously distended and almost black in color. The distension extended from five inches above the valve to six inches below it, and at each end there was almost complete occlusion of the gut. The twelfth dorsal vertebra, as has been already mentioned, was found to be fractured and partially dislocated, and the twelfth thoracic ganglion of the sympathetic on each side was surrounded by inflammatory products and disorganized. This condition of the ganglia Dr. Eskridge regards as the cause of the distended bowel, and he attributes the constriction at either end of the distension to irritation of the tenth dorsal and first lumbar ganglia. Death he believes to have been due to internal hæmorrhage, resulting from irritation of the over-distended bowel.—*Lancet.*

THE BACILLUS OF CHOREA.

Berkley (*Johns Hopkins Hospital Reports*, Vol. II, No. 6) reports one case of chorea insaniens in a woman, and one of ordinary chorea in a dog, in which he has made most careful post-mortem examinations. He concludes his paper with these remarks: "It would seem that chorea might be considered as a general systemic affection, acting with greatest intensity on the vascular system and lepto-meninges, and that its cause is to be sought for in a special bacillus, or its toxical product, not a coccus, the staphylococcus aniens being only an accompaniment to the other germ, as in many other infectious diseases. The so-called "choreakörperchen" of Flechsig and Wollenberg are, so far as I am able to judge from the first writer's description, by no means peculiar to chorea; if I mistake not, they are to be found not only in the globus pallidus, but in other parts of the brain, not only in this affection, but also in normal as well as diseased brains.—*Univ. Med. Mag.*

FACIAL HEMIATROPHY.

The *Neurologisches Centralblatt*, No. 15, 1891, contains abstracts of several cases of facial hemiatrophy. The first is recorded by Borgherini (*La Psichiatria*, viii, fas. 3 and 4). The patient was a man, aged 63. He had had chronic inflammation of the right lachrymal gland, which was incised. Shortly afterwards he developed localized pain in the right orbit, creeping sensations, and a feeling of numbness in the adjacent skin, chronic contraction of the right forehead and face muscles, atrophy of the tissues on the right side of the face, and opacity of the cornea. This condition was, on the left, limited by the middle line of the face, and on the right by the anterior border of the temporal and masseter muscles. The second case is recorded by Muratow (*Vratch*, 1891, No. 25). It is that of a woman who sought advice on account of cramp in the muscles of mastication. This began on the right side, and had a clonic character at first, but soon became bilateral and tonic. There was atrophy of the right side of the face, affecting both the lips and the tongue. There were no electrical alterations in the muscles. There were several pigmented spots on the side of the face, and the skin had the appearance of scleroderma, but this condition had appeared before the cramp in the muscles. The third case is by Jankau (*Deut. med. Woch.*, 1891, No. 26). The patient, a girl, aged 22, had for two years noticed great pallor, with yellow pigmentation and atrophy of the right side of the face, extending over the distribution of all three branches of the trigeminus, and she had lost much hair on the affected side. About the time of the appearance of the hemiatrophy the patient began to suffer from enlargement of the thyroid and ozæna. The next case is recorded by Dixon (*Dublin Journ. of Med. Science*, February, 1891). In a boy, aged 11 years, there followed, upon a violent blow over the left hip, schleroderma of the left half of the body, the left side of the face, and the left extremities, with atrophy of the affected arm and

leg, hemiatrophy of the face, and alopecia of the left half of the body. The last paper is by Girard (*Revue Méd. de la Suisse Romande*, 1891, No. 6). He cut through the sonsory portion of the trigeminus in the skull in dogs, and this was followed by hemiatrophy of the face, atrophy of the muscles of mastication, thinning of the skin, atrophy of the bones and of the tongue on the same side. He, therefore, concludes that the trophic fibres for the face run in the trigeminus, and not in the facial nerve.—*Brit. Med. Jour.*

THERAPEUTICS.

THE HYPODERMIC INJECTION OF CAMPHOR.

The employment of camphor hypodermically in solution in oil, alcohol, or alcohol and ether, is more general on the Continent than in England. German and Russian practitioners esteem it a valuable method of treating symptoms of impending collapse. Dr. Alexander, of Berlin, has published a paper giving the results of an extensive series of observations made during the last two years on the effects of hypodermic injections of oleum camphoratum (composed of one part of camphor to nine parts of olive oil) in a large number of cases of disease of the lungs. The dose given was fifteen minims once a day. As the effects of camphor are cumulative, it was found that four daily injections were as much as could usually be borne without some unpleasant effect, such as headache and restlessness at night. After an interval of a week, however, one more injection could be given without causing any unpleasant symptoms. Phthisical patients seemed to bear continued treatment better than others, and its results in the last stage of phthisis were very valuable, the night-sweats, the irritating cough, and the expectoration being diminished in a remarkable manner, even the first dose effecting a very noticeable improvement in the patient's condition. In hæmoptysis the method also proved very useful, patients being enabled to get about again without any fear of a recurrence more rapidly than under ordinary methods. Camphor injections administered in bronchitis increased the secretion at first, and afterwards caused it almost to disappear. They did not seem to be of much use when there was also emphysema. In pneumonia their value was especially marked in weakly individuals or in those with cardiac disease, and they cut short follicular tonsillitis and acute coryza. It was found that in some cardiac cases, where digitalis had ceased to be of benefit, after a few camphor injections, it could be again given with good results. These injections must, of course, be given to children only in very small quantities, but no effect appeared to be produced on the infants of mothers who were being treated by camphor injections for catarrhal pneumonia.—*Berliner Klinische Wochenschrift.*

STRYCHNINE NO CURE FOR DRUNKENNESS.

Dr. Kleefeld, of Gorlitz, has tried hypodermics of strychnine for the cure of drunkenness in seven cases. From one sixtieth to one fifteenth of a grain of strychnine were administered daily for ten days. The results were altogether negative. Although in two cases the morning vomiting was increased, in no case was the desire for intoxicants diminished.—*Deut. Med. Woch.*

ACUTE RHEUMATISM CONFINED TO THE TEMPORO-MAXILLARY JOINT.

The *British Journal of Dental Science* reproduces a report by Dr. Gallipe, published in *Le Progrès Dentaire*, of a case of acute rheumatism confined to the temporo-maxillary joint. It occurred in a patient of rheumatic diathesis. The symptoms were swelling of the cheek on the right side, with redness and pain on pressure; mastication and talking were both painful, with exacerbations at times. Pressure over the temporo-maxillary joint caused sharp pain. The upper and lower wisdom-teeth on the same side felt as if raised in their sockets. There had been no toothache. Careful examination of these teeth revealed no decay. The diagnosis was made of an attack of acute rheumatism in the right temporo-maxillary joint, and the patient was put upon salicylate of soda and quinine, rapid recovery resulting. Dr. Gallipe considers that the feeling of raising in the teeth was due to an attack of rheumatism in the alveolo-dental membrane itself, or rheumatic periodontitis, rather than simply the extension of pain from the affected joint.—*Lancet.*

PENTAL: A NEW ANÆSTHETIC.

Pental is the new name applied by Prof. J. v. MERING to *Trimethylæthylen*, a product of amylen-hydrate heated with acids, and recommended by the distinguished clinician as a safe and effective anæsthetic. Pental is described, chemically, physically, and as to its possible utility, in the *Pharmac. Zeitung*, Oct. 7, 1891, and in the *Pharmac. Centralhalle*, Oct. 15, 1891. Both journals conservatively withhold endorsement of the product, basing apparent skepticism on the fact that chemically the body has long been known, and that analogous amylens (for instance, *iso-amylen*) were employed as anæsthetics almost forty years ago, but quickly discarded because found to be unsatisfactory and offensive, owing to their unpleasant odor.

So was cocaine well-known; yet who will deny that the discovery of its wonderful anæsthetic properties was a revelation to the medical world, and worked a revolution in treatment and practice which will forever distinguish the name of the discoverer, Dr. KOLLER, whose publication in August, 1884, was responsible for the present universal application of cocaine.

While Pental will probably not excite the same degree of interest as did cocaine, it is safe to assume—reckoning on the high character and recognized conservative authority of Prof. v. MERING—that this product will find valuable application. From reports already furnished, notably that of Prof. HOLLAENDER, of Halle a S. (*Therap. Monatshefte*, Oct., 1891), which was read before the Dental Section at the Convention of German Naturalists and Physicians, at Halle, this year, the new anæsthetic is shown to be suitable and efficient for minor surgical operations, and particularly in dentistry.

Pental (C_5H_{10}) occurs as a colorless liquid, of low specific gravity; its boiling point is 38° C.; it burns with an illuminating flame, and is readily inhaled without affecting the membranes of throat or passages. It is insoluble in water, but miscible in all proportions with alcohol, chloroform or ether, and being inflammable, like the latter, must be protected from possible ignition. It is exceedingly volatile, but does not decompose on exposure to air or light,

The inhalations are simply conducted, 10 to 25 cc. of the fluid sufficing, and narcosis ensues within 50 to 90 seconds (Dr. HOLLAEDNER), without influence on respiration or the action of the heart, and causing no unpleasant side or after-effects. From a careful consideration of Dr. HOLLAENDERS' report, a most favorable impression of the value of Pental is gathered, and we hope to supplement and confirm this by early additional original reports.—*New Remedies.*

A REMARKABLE COMPLICATION OF LUPUS.

DR. V. LESPINNE communicated to the Congress on Tuberculosis a paper dealing with a complication of an infective nature, but little known, occurring in cases of lupus vulgaris (*Mercredi Méd.*, September 2d, 1891.) He says that in some cases of this disease, especially in the variety known as lupus exedens, there suddenly appears a series of pathological phenomena of a general nature, suggesting the onset of some new disorder. It is especially when the patch of lupus is about to ulcerate that the complication supervenes, whether the ulceration be due to a natural cause or to surgical interference. A sudden rise of temperature commonly heralds the impending disturbance; the patient then falls into a condition of prostration, resembling the typhoid state. The mucous membranes become affected, there being general catarrh, with gastric disturbance and diarrhœa; the lungs also participate, a catarrhal condition of the bronchial tubes being revealed by the stethoscope. The serous membranes may also be involved; endocarditis appears, and a *bruit* becomes audible. The most striking feature of the disorder is the rapidity of its onset; the symptoms, moreover, appear almost simultaneously, so that a patient may present them all who was quite well the previous evening. Even when a lupus patch has cicatrized this general affection may supervene, in which case the scar breaks down and an ulcer forms. The condition of the patient resembles that seen in a case of typhoid fever or acute miliary tuberculosis, and the general disturbance recalls the results of the injection of tuberculin. It may be kue to the absorption of the products of pyogenic organisms, or of the products of the tubercle bacillus, or of the mixed products. The application of parasiticides and antiseptics to the lupus

patch is recommended. As regards the issue, in some cases the disturbance passes away entirely, and the patient regains his usual health; in others, general tuberculosis results. In cases in which the endocardium has been affected, the attack may leave the patient with organic diseases of the heart.—*British Medical Journal.*

NITROGLYCERINE SUBCUTANEOUSLY IN POISONING BY ILLUMINATING GAS.

Dr. Hoffmann (*Allgemeine med. Centr. Ztg.*, 1891; *Ugeskrift for Læger*, No. 27, 1891) reports a case of poisoning by illuminating gas where the patient breathed the air of a little room into which gas poured from an open burner from 11 in the evening until 9 in the morning. Four grammes (1 fl. ʒ) of ether were injected under the skin without result. One milligramme ($\frac{1}{60}$ gr.) of nitroglycerine was injected into the præcordial region. One-half a minute later the pulse became stronger and the respiration deeper. From then on the pulse was regular and strong. One hour later he could swallow several spoonfuls of coffee. That afternoon there was headache, dyspnœa and malaise. The next day he was entirely well.

SUBCUTANEOUS USE OF ERGOTIN.

Dr. Driver (*Therap. Monatsh.*, September, 1891), says that acute hæmoptysis coming on suddenly and due to erosion of large vessels, cannot be stopped by any injection of ergotin, but that the cessation is brought about by the coagulation of the blood in the cavity acting as a tampon. Absolute rest and the controlling of the cough by morphine are necessary. There is no object to be gained by the ice bag, and the inhalation of astringents is harmful. In cases of continued capiliary hæmorrhage from the walls of the cavity (which must be looked upon as due to a congestive hyperæmia), the author says that, combined with measures to increase the heart's action, ergotin is almost a sovereign remedy. The dose used is generally too small. If the bleeding is severe, 0.5 to 1.0 gram. should be given. After disinfecting the syringe, the required amount of ergotin (Bombelon) is taken up, and the syringe filled with distilled water or a very weak solution of carbolic acid or morphine. This is injected after the skin has been thoroughly cleansed. In this way no inflammation or suppuration will arise.—*British Med. Journal.*

SURGERY.

STAB-WOUNDS OF THE SPINAL CORD.

Dr. Otto Bode (*Berliner klinische Wochenschrift*, Jahrg. xxviii., No. 22) gives an interesting account of the diagnosis, course, and proper treatment of stab-wounds of the spinal cord. He cites the case of a man, who, in a street fight, received several wounds on the head; on the back of the neck there was one about five centimetres long, running obliquely down to the spinal column and exposing at its bottom the atlas and axis. At the moment of wounding the patient fell to the ground, lost consciousness for only a minute, but remained paralyzed on the right side below the point of wounding. When called upon the right lower extremity responded slowly and reluctantly, but for walking or standing was weak and useless. There were no areas of anæsthesia, nor any disturbance of the special senses. The bladder and rectum were normal; priapism not present. The muscles of respiration on the right side were decidedly implicated. The faradic excitability of the muscles remained normal. For three weeks this condition continued apparently unaltered. At the expirrtion of this time the patient began to gain more and more the use of the paralyzed limbs, albeit at the same time the reflexes became greatly exaggerated, and at the least touch the muscles jerked. The patient was under observation for three months; the paralysis was practically gone, and even the reflexes had returned to normal, and in a year's time no evil effects of the wound remained, save at times a slight tremor in the muscles which had been paralyzed. The wound was treated solely by the antiseptic dressings.

From the anatomical relations of the vertebræ and their ligaments, Dr. Bode proceeds to show that in the cervical region when the neck is bent down, as it usually is when a man receives a wound there in a fight, the cord can be wounded at almost any point of its circumference, or, indeed, may be wholly severed, without injury to the vertebræ. From the

motor disturbances and the direction of the external wound in his case, he diagnoses a partial severence of the anterior column and the anterior part of the lateral column on the right side. Therefore, he maintains that it is not possible that the lateral columns in the cervical cord carry both sensory and motor fibres, since in his case there were absolutely no disturbances of sensation.

Dr. Bode cites several cases of perfect healing of wounds of the spinal cord involving not quite half its diameter, which were recognized during life to be wounds of the cord, or were subsequently clearly demonstrated at the autopsy by the cicatrices.

He goes on to explain that the appearance of symptoms which set in generally on the second or third day after the wounding, and which might easily be mistaken for traumatic myelitis, is due to what Schiefferdecker describes ("Ueber Regeneration, Degeneration, und Architektur des Rückenmarks," *Virchow's Archiv*, Bd. lxii.) as traumatic degeneration following wounds of the spinal cord, and setting in on the second to the third day. The degeneration begins as a disintegration of the elements of the nerves into glossy flakes. This process extends from the cut surfaces about four to six millimetres above and below. Hence, in the case of wounds in the neighborhood of the fourth cervical vertebræ, although the phrenic nerve be not at first implicated, yet at the end of the second or third day that complication may arise.

The increase of the reflex excitability, Dr. Bode explains as due to what Schiefferdecker describes as secondary degeneration, which manifests itself about the fourteenth day, and which, by cutting off the influence of the reflex inhibitory fibres running down the lateral columns in the cervical cord, gives rise to an increase in the reflexes. Schiefferdecker describes a third form of degeneration, which he calls cavity formation, and to this Dr. Bode ascribes the fibrillary tremors in the limbs formerly paralyzed.

Retention of urine and fæces is not uncommon following wounds in this region. The organs either return to normal or else incontinence sets in. The height of the wound has no influence hereon. Priapism almost always occurs where there is vasomotor disturbance. Elevations of temperature are not found on the anæsthetic areas of the skin, if there be any, but only on the areas where there is motor paralysis. This proves that the vascular nerve-supply runs down the same paths as the motor fibres. Dr. Bode cites a very interesting case where he found variations of temperature of the affected part entirely independent of the temperature variations in the rest of the body.

He maintains that it is possible to locate with absolute certainty the position of the wound on the cord from the symptoms, since some hæmorrhage affecting the parts immediately adjoining is inevitable, and, furthermore, unless the assailant's knife be very sharp, it must make more or less of a contusion on the cord before it cuts through the elastic pia mater.

To sum up, the most conclusive symptom is a sharply defined paralysis below the point of wounding, coming on at the moment the wound is received.

As to treatment, he says, the external wound should be enlarged and left open. above all, free drainage should be encouraged, even to the loss of meningeal fluid, and the blood and secretions of the wound should be kept aseptic. Finally, the wound should be allowed to heal by granulations, or sewn up secondarily.—*Amer. Jour. Med. Sciences.*

PÆDIATRICS.

COMMON THYME IN WHOOPING-COUGH.

Common thyme, which was recommended in whooping-cough three or four years ago by Dr. S. B. Johnson, is regarded by Dr. Neovius, who writes a paper on the subject in a Finnish medical journal, as almost worthy of the title of a specific. During an epidemic of whooping-cough he had ample opportunities of observing its effects, and he came to the conclusion that if it is given early and constantly it invariably cuts short the disease in a fortnight, the symptoms generally vanishing in two or three days. They are liable to return if the thyme is not taken regularly for at least two or three weeks. He gives from one ounce and a half to six ounces per diem, combined with a little marshmallow syrup. It may produce a slight diarrhœa. It is important that the drug should be used quite fresh.—*Amer. Jour. Med. Science.*

ON VISCERAL HÆMORRHAGES IN STILL-BORN CHILDREN; AN ANALYSIS OF ONE HUNDRED AND THIRTY NECROPSIES.

Spencer (*The Lancet*, June 20, 1891), in a paper giving a detailed account of a consecutive series of one hundred and thirty necropsies, on fresh, mostly still-born fœtuses, discussed the causation of the hæmorrhage, and reached the following conclusions:

1. In children still-born, or dying shortly after birth, congestion or œdema, and hæmorrhages, are usually found in various important viscera.

2. These hæmorrhages occur in cases delivered either naturally or by version, or by forceps, through normal or abnormal pelves; in primiparæ and multiparæ; with large and small children; in "easy" and difficult, rapid and prolonged labors.

3. These hæmorrhages are, however, most frequent and severe in children subjected to much pressure by the parturient canal, or instruments, or the hand of the attendant, especially when delivered by the lower extremity.

4. Cerebral hæmorrhage is more frequently found in still-born children delivered by the forceps than in those born by the breech, and in these latter more frequently than in those born naturally by the head.

5. Hæmorrhage into most of the other viscera is more frequently met with in pelvic than in cephalic presentations.

6. These hæmorrhages and the accompanying injuries are in many cases the cause of still-birth, and when not immediately fatal may be followed by the gravest consequences.

7. They are most likely to be avoided by preventing premature rupture of the membranes, by artificial dilatation of the parturient canal (when necessary), by restricting the employment of version and other artificial manipulations to urgent cases, and by preferring cephalic to podalic version in cases suitable for the former.

8. The use of the forceps should be absolutely limited to cases in which there exists some pressing danger to mother or child, and it should never be employed merely to shorten the time of labor.

9. In breech presentations, examinations of the genital organs of the child should be carefully avoided during delivery. As soon as the child's limbs are born they should be wrapped in a thick layer of antiseptic wool. If traction be necessary it should be made over wool wrapped around the child's limbs or pelvis. It should never be made by the hand around the child's waist.

10. In delivering the after-coming head, care should be taken that the sterno-mastoid muscles are not unduly stretched or pressed upon. When the after-coming head is in the pelvis, where there is even slight difficulty, resort should be had to the forceps.

OBSTETRICS.

IS A CHILD VIABLE AT SIX AND A HALF MONTHS?

Dr. Llewellyn Elliot, in a paper read before the *Am. Assoc. Obstet.*, Sept. 18, 1891, reaches the following conclusions:

1. A child under peculiar circumstances of development is viable at four months.

2. A child is viable at six and a half months.

3. The moral character of the parents has nothing to do with the birth of a premature child, when considered from a standpoint of constitutional development.

4. Obstetricians should strive to convince jurists of these facts.

SEPTIC DISEASE OF THE UMBILICUS.

Eröss, from a study of the temperature of 1000 infants born in the obstetric clinic at Buda-Pesth, comes to the conclusion that septic infection from the navel in association with detachment of the umbilical cord is a frequent cause of fever, and an important element in the mortality of infants (*Wiener med. Woch.*, No. 41, 1891). Fever of longer or shorter duration was present in 450 cases, and in 220 it was due to a pathological condition at the umbilicus; gangrene of the cord in 81, sloughing in 55, protruding stump in 55, omphalitis in 24, ulceration in 3, and gangrene of the umbilicus in 2; death occurred in 8 cases. Waddington (*Journ. of the American Medical Association*, October 10th, 1891) reports two cases of tetanus neonatorum which began to recover immediately after the application of thorough antisepsis to the foul granulating protrusion at the umbilicus, combined with the internal administration of betanaphthol (gr. 1) and chloral hydrate

(gr. 1). He states that he had previously met with six other cases of the disease, all of which were fatal; these six cases had been treated by sedatives, and not by antiseptics.—*Brit. Med. Jour.*

SUBCUTANEOUS INJECTIONS OF ETHER IN PUERPERAL ECLAMPSIA.

An interesting supplement to the treatment of puerperal eclampsia is offered by Dr. Perron, and quoted in the *Wiener Med. Wach.*, April 12, 1891. The case recorded was that of primipara, twenty years old, who was seized with eclamptic convulsions two hours after delivery. Chloral in liberal doses, blood-letting, and even inhalations of chloroform, had been tried without avail. The convulsions, which had begun at eight in the morning, continued with unabating severity to return every half hour until noon, and then became almost unremitting. The patient lay convulsed with severe dyspnœa and deeply cyanosed, her breathing was labored and stertorous, and death was momentarily expected. Dr. Perrin then injected subcutaneously a syringeful of ether, and in a few minutes the respirations became more regular and less labored. Fifteen minutes later another similar injection was made, and a third injection two hours later. After the second injection the convulsions ceased entirely, and the patient made a speedy recovery. It is to be noted that no albumen was found in the urine.

INTRA-UTERINE IRRIGATION AFTER LABOR.

L. S. McMutry (*American Journal of Obstetrics*, October, 1891) speaks of the difficulty of treating post-partem sepsis in its initial stage. If the case has been subject to extensive laceration of the maternal parts, or one where frequent examinations and manipulations have been necessary after labor, or when the precautions against sepsis on the part of the physician or nurse have not been perfect, then an accession of fever on the third or fourth day, with fetid discharges, should indicate at once the necessity for intra-uterine irrigation. When the absorption of septic symptoms is marked by a rigor or pronounced chill, followed by high fever and tenderness above the pubes, systematic flushings of the uterine cavity by the surgeon should be practiced every two, four or six hours, as indicated by the character of the discharge. Antiseptic agents are not essential, but the decomposing material should be flushed out. Patient should be gently lifted on a table and placed in Sims' position, the speculum introduced and the uterus irrigated with warm water that has been previously oiled. The extremities of the patient should be protected by sufficient covering. In cases where manual detachment of the placenta has been necessary, the douche may be supplemented with the application of the dull curette or Simin's spoon.

GYNÆCOLOGY.

THE EARLY DIAGNOSIS OF CANCER OF THE UTERUS.

Winter (*Berliner klin. Wochenschrift*, 1891, No. 33) reviews the recent results of extirpation of the cancerous uterus in Germany, showing that the total mortality of the five principal operators is only 8 4 per cent., the lowest being Kaltenbach's (3.3 per cent.). Although a certain number of fatal cases is inevitable on account of the difficulty of absolutely eliminating sepsis, other dangers ought to be avoided by improved technique, so that the mortality can be reduced to 5 per cent. The statistics of high amputation are still better, the Berlin Klinik showing a mortality of 6.5 per cent. (in 155 cases) previous to 1884, since which time no deaths have followed the operation in 64 additional cases.

Unfortunately, the remote results of both operations have not been as favorable as could be desired. A local recurrence (in the cicatrix) can usually be expected within two years at the utmost, while recurrence in the lymph-glands and pelvic connective tissue occurs later, This difference has not been clearly defined in the statistics. According to the writer's observations, after high amputation, 38 per cent. of the patients were well at the end of two years, and 26.5 per cent. had no recurrence five years after operation, after which time a return of the disease is exceptional. Fritsch has noted 36 per cent. of cures after vaginal hysterectomy at the end of five years, and Hofmeier 33 per cent. at the end of four.

Only a small proportion of the patients with cancer of the uterus are suitable cases for a radical operation (about 25 per cent.), and if one-fourth of these are cured, it follows that only 7 per cent. of

the entire number of cancerous patients are cured. In other words, the diagnosis of malignant disease is not made at a sufficiently early stage, and this neglect is traceable to the general practitioner. "The physician to whom the patient first applies decides her fate in the majority of cases." Hence it is extremely important that he should be familiar with the initial symptoms. Of these a watery vaginal discharge is the most constant, especially in carcinoma of the portio. Mænorrhagia, in a patient whose flow has formerly been normal should always awaken suspicion and lead to an examination. Hæmorrhage after coitis is an initial symptom of great importance, and when occurring some time after the establishment of the menopause it is almost pathognomonic of malignant disease.

Pelvic pain is usually a late symptom, due to secondary parametritis; but intractable sciatica, developing after the menopause, is significant. When a patient with these symptoms applies to her physician she ought certainly to be examined, and if the portio does not present a suspicious appearance, search should be made for cancer higher up in the cervix or corpus uteri. Fragments should be removed for microscopical examination. Patients themselves are often to blame since they defer seeking professional advice until too late, because they have no severe pain, the irregular hæmorrhages being attributed to the approaching change of life. It is a peculiar fact that women who have cancer are less likely to fear it than those who have not. In conclusion, the writer urges that both physicians and patients should be trained to recognize the initial symptoms of cancer of the uterus, and to have the diagnosis settled at once.—*Am. Jour. Med. Science.*

PRIMARY CANCER OF THE CLITORIS.

Dr. F. J. Merkle (*Centralbl. f. Gynäk.* October 3d, 1891) observed this disease in a woman, aged 61. At the site of the clitoris was a tumor of about the size of an apple, already beginning to break down. There was an indurated gland as big as a walnut in the left groin. The tumor of the clitoris was removed by means of the thermo-cautery. The patient died seventy-three days after the growth was removed. At the necropsy, epithelioma of the clitoris, with metastatic deposits in the lymphatic glands, was discovered. Dr. Merkle believes that the clitoris was most probably the seat of the primary disease in this case.—*Brit. Med. Jour.*

HYGIENE.

VACCINATION AS A PROPHYLACTIC AGAINST INFLUENZA.

Goldschmidt (of Madeira) some time ago adduced evidence (*Berlin klin. Woch.*, November 19, 1890, that vaccination had a prophylactic influence as regards influenza. An epidemic of small-pox broke out in November, 1889, and rapidly extended over the island. In January, 1890, influenza made its appearance, the epidemic reaching its height in February and March, disappearing gradually in May. Just at the time it was becoming severe re-vaccination was being extensively practiced on account of the contemporaneous invasion of small-pox, and it was observed that all successfully re-vaccinated persons remained exempt from influenza. Goldschmidt observed 210 cases of re-vaccination, 112 being successful. Out of the 98 without result only 15 contracted influenza, and even these were very slight cases. In an isolated villa with 26 inmates, of whom 14 were not re-vaccinated, all the latter were attacked with influenza, in two cases very dangerously; while all those who had been re-vaccinated remained free. In a recent paper (*ibid.*, November 2, 1891) Goldschmidt compares the statistics of the German army for 1889 with others relating to the civil population. The former show that 55,263 men (11 per cent.) were attacked with influenza. Of these, 60 died, giving a mortality of about 0.1 per cent., or a death rate of 0.01 per cent. for the entire army. Of the men enrolled during 1889, 85 per cent. were vaccinated with, and 15 per cent without, result. Assuming the same proportion for the whole service, there would be 75,900 men re-vaccinated without result, a number much larger than that of the influenza cases. Berlin showed a death-rate from influenza of 0.12 per cent. of its civil population (1.875 deaths), and Paris one of 0.25 per cent. (5,630 deaths); while that for the German army (0.01 per cent.) amounted to only one-twelfth of that for Berlin, and one-twenty-fifth of that for Paris. This result repeats itself with but slight vari-

ation for all other German and non-German towns. The relative proportion of influenza cases to population must, therefore, have been much greater for these towns than for the army, and their mortality must also have been greater, since that for the army (0.1 per cent.), if applied to Berlin, with its 1,875 deaths, and to Paris, with its 5,630 deaths, would indicate a larger number of influenza cases than their actual populations. From the most trustworthy sources a mortality of 0.3 for Berlin, and one of 0.4 for Paris, may be assumed as not far from the truth. These numbers would indicate an extent for the epidemic of 40 per cent. and 62 per cent. of the populations of Berlin and Paris respectively, as compared with 11 per cent for the German army. A number of garrisons remained quite exempt, even where there was no isolation, while the civilians suffered severely. Goldschmidt considers that the relative immunity conferred by vaccination is probably not lasting.—*Brit. Med. Jour.*

ARE COLDS INFECTIOUS?

The question of whether catarrhal attacks, popularly known as "colds," are infectious, is often debated in family households, and although no definite investigation in the direction of ascertaining the presence or not of a specific germ in the mucous discharges has been undertaken by bacteriologists, there is still strong presumptive evidence that infectivity of some sort prevails in these cases. The subject is discussed by Mr. Hutchinson in the last number of his *Archives*. He remarks that "colds" are capable of origination by influences brought to bear on the nervous system, and their secretions become infectious. "Thus many being from exposure to draughts or damp, and many others from personal infection. No distinction is to be drawn between the two; they are, as a rule, exactly alike. Those which arise from infection, may, however, be developed into special virulence, and may then prevail as epidemics, which are attended by more or less individuality of type. Probably infection is the cause of by far the greater number of common colds. Infection may be believed to be always at work when a cold goes through the family." Some day, perhaps, a catarrhal bacillus will be discovered. Under any circumstances researches in this direction would probably be productive of interest to the bacteriologist, and, moreover, from the information so gained, the possibility is not a remote one that some definite treatment could be designed for the alleviation of one of the most annoying morbid affections to which we are subjected at this period of the year.—*Medical Press.*

MEDICAL CHEMISTRY.

A COLOR REACTION FOR SALOL.

A few drops of nitro-sulphuric acid are put into a watch-glass and a few grains of powdered salol sprinkled in. This is colored yellow, and on stirring with a glass rod the color passes from brown to green. As soon as this tint is seen the contents of the watch-glass are transferred to a porcelain dish, 50 ccm. of water added and well stirred, the liquid becoming rose-colored, while the green tint may be restored by the addition of ammonia. Resorcin treated in the same manner becomes at once of a deep blue color; on adding water a red coloration is given, which ammonia changes again to blue.—*Journ. de Pharm. d'Anvers.*

THE COMPOSITION OF TUBERCULIN.

Klebs (*Deutsche medicinische Wochenschrift*, Nov. 5, 1891) records some further experiments confirmatory of the view that the injurious effects produced upon patients by tuberculin are due to non-essential ingredients, which can be removed without affecting its potency. These ingredients he believes to be organic bases (alkaloids), giving the well-known reaction of alkaloids, and which Klebs originally separated by precipitating tuberculin with absolute alcohol and extracting with benzol and chloroform. By this means was obtained a substance called *tuberculinum depuratum*, which gives but faint alkaloid reactions, but which, equally with the ordinary tuberculin, is able to cure animals suffering from tuberculosis. Recently Klebs has improved on this method, and a full description of the details will shortly be published. In the preliminary sketch, now published, he states that he has called the new product *tuberculocidin*, on account of its power to kill the tubercle bacilli. The mode of preparation consists in the separation of the alkaloids, and the extraction of the tuberculocidin from the precipitate by water. The properties of this newly-discovered tuber-

culocidin are precipitability by absolute alcohol and ammonium sulphate, its behavior towards the albumen tests, and its physiological action. This substance is entirely innocuous, causing no rise of temperature and rapidly improving the condition of tuberculous patients. The hectic fever and the night sweats disappear; appetite improves, body weight increases; all the signs of pulmonary catarrh rapidly clear up. Thirty such cases have already been treated by it, without any ill effects whatsoever. More time for observation, however, will be required before the patients can be pronounced absolutely cured.—*Brit. Med. Jour.*

NEWS AND MISCELLANY.

STATUS OF THE MEDICAL PROFESSION IN JAPAN.

It appears by the latest census returns made up to the end of 1889, the total number of physicians was 41,405, being an increase of 465 as compared with the the previous year, The total number of apothecaries, midwives, and druggists was 32,111, being an increase of 1,257 as compared with the previous year. The number of hospitals was 573 at the end of 1889 public hospitals had decreased by 3, while private hospitals had increased by 12, as compared with the previous year. From the same source we gather that the relative proportion of the medical profession to that of the population is much greater in Japan as compared with England. The actual ratio of population to each medical practitioner being 965.—*Med. Press*

INTERNATIONAL DERMATOLOGICAL CONGRESS.

The Second International Congress of Dermatology will be held at Vienna from September 5 to 10, 1892. Professor Kaposi is President of the Organizing Committee. The following subjects are proposed for discussion: The Lymphatic Diseases of the Skin from the Anatomico-pathological Point of View, to be introduced by Dr. R. Paltauf, of Vienna; the Present Condition of Leprosy in Europe, by Drs. Arning, of Hamburg, and Petersen, of St. Petersburg; Dermatomy-coses with Special Reference to the State of Affairs in France, by Dr. Feulard, of Paris; Late Syphilis, by Professor Neumann; Anatomy and Development of Epidermic Pigment, by Professor Jarisch, of Innsbruck; Psorospermosis, by Professors Neisser, of Breslau, and C. Boeck, of Christiania; The Principles of the Treatment of Gonorrhœa, by Professor Neisser; Lupus Erythematosus, by Mr. Malcolm Morris, of London, Dr. Th. Veiel, of Canstatt. Addresses will also be delivered by Drs. Besnier and Fournier, of Paris; Pick, of Prague; Doutrelepont, of Bonn; Schwimmer, of Buda-Pesth; and Riehl, of Vienna. In connection with the Congress there will be an Exhibition illustrative of the pathology and treatment of skin diseases and syphilis. Communications relative to the exhibition should be addressed to Dr. Hans Heger, I, Stefansplatz, 8A, Vienna. The General Secretary of the Congress is Docent Dr. G. Riehl, I-20, Bellariastrasse, Vienna.

THE CHARACTERISTICS OF THE PRESENT PANDEMIC OF INFLUENZA.

According to observations made at recent meetings of the Berlin Medical Society, it would seem that the epidemic of influenza began there during the first week of November, the earliest cases admitted into hospital having come under treatment on November 7. Ruhemann stated that the most noticeable difference between this and the other recent epidemics has been the large number of women and children, and the small number of outdoor workers attacked. Guttmann mentioned an instance in which the admission of a single patient suffering from influenza was shortly followed by the occurrence of 13 fresh cases. Fränkel, who took notes of 138 cases, found that only 9 (6.5 per cent.) had suffered from the disease before. The chief complications have been pneumonia and heart failure. The effect on the death-rate in Berlin has not been so marked as during the last epidemic, but it has been considerable (27 per mille as compared with an average of 18). In other parts of Germany the effect has been more marked; thus official statistics show that the death-rate has been doubled, or nearly double, in several towns. It rose, for instance, to 44 in Posen (average 21), to 45.6 in Frankfort-on-Oder (average 23.2), in Bremen to 34.3 (average 17.1), and in Rostock to 33.5 (average 15.6)—*Brit. Med. Jour.*

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CLINICAL LECTURE.

ABSCESSES OF THE BREAST.*

By PROFESSOR DUPLAY,
PARIS, FRANCE.

Gentlemen: I will to-day call your attention to a woman, 28 years of age, servant by occupation, delivered five weeks ago, who has suckled her child for seventeen days. She is now suffering from fissured nipples. After a little while she ceased nourishing the child at the right breast, because this had become tumefied and painful. On the 2d of June there appeared on the external portion of the areola a little abscess, near which there was a cicatrix, accompanied with a slight local induration. In five days the whole of the right breast became swollen and painful, and the patient decided to enter the hospital for treatment. The woman exhibits now an induration of the whole right mammary gland, but there is no invasion of the subcutaneous cellular tissue. There is no pronounced tension of the skin, nor are there any signs of fluctuation. Soon afterwards the consistency of the whole region became notably diminished; at the same time, there appeared a point within the nipple that gave distinct fluctuation. On pressing the gland, especially on this part, there is ejected, by the galactophorous ducts, a liquid resembling milk mixed with pus. Otherwise the patient is in a fair condition, and there is no marked abnormal temperature.

In the presence of these phenomena there is no doubt that we are here dealing with one of those varieties of phlegmasias of the mammary region, called "abscess of the breast;" but, thus formulated, the diagnosis is incomplete. It will be interesting to examine the case from etiological and anatomical points of view. There exists, indeed, a certain number of abscesses of the mammary region: Those of the nipple, those of the areola, and those of the mammary gland proper. The first ones are acuminate and globular. Velpeau calls them tuberous or tubercular. Our patient has neither of these abscesses. At the mammary gland proper we find superficial abscesses, deep abscesses developed in the cellular sub-mammary tissue, and abscesses of the glandular tissue itself. In our case, we have not, evidently, a superficial abscess; and I have asked myself, on the contrary, if we could not have an abscess belonging to this variety in another patient, delivered in our wards, in whom it was found, on the region of the breast, a limited fluctuating tumor, situated manifestly in the sub-cutaneous tissue; but here also the whole of the mammary gland is involved, and there is noticed a marked induration. The abscess, although superficial, came on as a secondary manifestation. The woman whose history I have given you at the beginning of this lecture, has no longer a sub-mammary abscess. This, in fact, is easy to diagnose with precision. It is projecting, giving rise to an extreme tension of the skin, and to a considerable swelling of the gland, all of which are characteristic signs. The question arises whether the condition is that of a parenchymatous abscess, a true mastitis, or a mammitis. In fact, what characterize a glandular abscess are the freedom of the sub-cutaneous cellular tissue, the mobility of the indurated gland in the deep parts, and the special consistency of the gland, as if it were injected with suet.

Let us study the pathogenic relations of the diagnosis. You know that the mammary phlegmons are especially frequent after labor, and they are also seen during the period of gestation. It is to-day proven that they are particularly common in women who, after they have suckled their children for a certain period of time, a few days or a few weeks, cease to do so. Our patient may be included among these, and I have told you that she

* A lecture delivered at "L'Hospital de la Charite," and published in *Le Progres Medical.*

suckled her own child for seventeen days before she sent it to a wet nurse. The effect of cold, the want of proper cleanliness, and the small sores produced by the mouth of the child, all play an important part in their production. They similarly occur, and with great frequency, if the sores about the nipples already exist at the time when the child begins to suckle, and which may be attended by a complete detachment of the nipples. All this constitutes a starting point for all causes of infection, and is, in a general way, the ordinary beginning of puerperal mammitis.

The pathogenic theories promulgated in regard to these affections have been modified. Velpeau still inclines to the theory that engorgement of the milk produces a painful distention of the galactophorous ducts, which finally rupture, and the milk, thus escaping and diffusing in the cellular tissue, is transformed into pus. It is scarcely thirty years ago when Sappey, Nelaton, and his pupil, Richard, opposed this old doctrine. They thought that the majority of the abscesses of the breast were the result of a lymphangitis, which, starting from the nipple fissures, rapidly gained access to the deep parts. This theory is somewhat seductive, and the anatomical reasons upon which it is based seem to carry a certain degree of conviction. The clinical proofs are far from being conclusive. I have often, with these alone, combatted the hypothesis of Nelaton, and I have done this based precisely upon a certain number of clinical facts: The nearly constant absence from the beginning of involvement of axillary glands in abscesses of the breast, whereas in other parts the least lymphangitis is accompanied by adenitis, oftentimes of a more serious nature than the original lymphangitis; then, the nearly always insiduous beginning of the mammary abscesses is strikingly different from the commencement of a lymphangitis, which is generally accompanied with rigors and high temperature. In one word, I am sustained by what we know about abscesses of other glands, such as the parotid and the testicle, in which the inflammation gains access through Steno's duct and vas deferens respectively. From these considerations I conclude that it is useless, in the case of the mammary gland, to seek for anything especial, and that the inflamation in this case must likewise travel through the glandular ducts, and invade, secondarily, the cellular tissue.

In these latter times the microbian doctrines have wrought serious changes in regard to this theory. I can understand how, instead of travelling through the lymphatics, the infection may be carried through the grandular tissue. However, this is not merely a theoretical view taken of the matter. Shosser has discovered and described microbes, all over the mammary gland up to the acini. Budin has met with an extremely rare form of mammary abscesses, and the one found in the woman before us may be an example of them: In three patients, on pressing upon the breasts, there was exuded from a galactophorous duct, not milk, but thick pus sufficient to fill a small glass.

He cites likewise one case of this nature, in which a complete cure was effected by this simple mauœuvre. The abscess, undoubtedly, had been developed from the very beginning solely upon the glandular elements. It was an abscess due to staphylococci. Cazin and myself have been conducting, of late, a series of bacteriological researches upon abscesses of the breast, and we have found either staphylococci or streptococci, but never pneumococci, which we expected to find in some cases, at least, in which their presence might have been accounted for by infection through the saliva of the child. Be this as it may, we must admit to-day that in the majority of cases, a microbian agent penetrates into the galactophorous ducts through the fissures of the nipples, or in some other way, as in the case of Budin, and that, secondarily, it invades the cellular tissue.

You will meet every now and then with a typical mammary lymphangitis, but the infection here follows a distinct and especial course. I believe that lymphangitis is frequently complicated, in the course of its development, with inflammation of the ducts; this may be the case with our patient, and we find considerable enlargement of the axillary glands, which are painless to the touch. What is the clinical history of mammary infections? Often they get well spontaneously, but always there is more or less formation of pus. The inflammation may be propagated to the subcutaneous, or deep cellular tissue, more frequently to the interlobular tissue, which becomes the seat of one or more abscesses, coming on simultaneously or successively, and converting the whole gland into a sponge of pus. Sometimes the pus gains access to the milk ducts; this is the form described by Budin, pointed out by Chassaignac, but which I do not consider as absolutely rare.

The prognosis of mammary abscesses is generally benign. Their formation, their rupture, and their cure may occupy but a few days. This is what is occurring in our present case. In other instances the affec-

tion assumes, on the contrary, a more serious character; fistulæ may be formed everywhere in the gland. These intermediary forms are the most frequent.

What is to be done in a mammary infection? At the beginning, compression, the refrigerants largely employed in Germany, topical applications (mercurial ointment), and antiseptic poultices may be tried; but I have little confidence in these measures. On the appearance of fluctuation I have always practiced incision. You know my manner of acting in these cases, which is contrary to the method of Gosslein, who recommends this procedure only as a last resource, or when an opening is established by itself. Erysipelas may come on as a complication from the presence of wounds; to-day we must fear, above all, purulent infiltrations, which may traverse and destroy the whole gland. In such cases, counter-openings may be necessary. You must not lose time if unfortunately a patient should come to you in the last stages of the disease, when not only abscesses, but even fistulæ may be present.

I will conclude by considering a practical point. After a cure has been established, the gland does not soon acquire its normal consistency; it continues to present an indurated or hardened condition even for weeks, although rarely this soon passes off. Most commonly a chronic mammitis is slowly developed towards the establishment of a complete cure. It is in these conditions you will obtain the best results from the employment of a methodical compression.

DUBOISINE AS A SEDATIVE AND HYPNOTIC.

Dr. H. Gellhorn recommends duboisine sulphate as a prompt sedative, having no dangerous by-effects, in the excitations of psychoses.

The hypnotic action of duboisine sulphate in simple agrypnia has not yet been fully gauged; perhaps sulphonal is prompter in this respect. In excited patients duboisine sulphate generally induces sleep. For these, according to Gellhorn, the dosage is as follows:

Hypodermically, 0.0008—0.0012 gramme ($\frac{1}{80}$—$\frac{1}{50}$ grain) per day, at one injection, for females; and 0.0012–0.0022 gramme ($\frac{1}{50}$—$\frac{1}{30}$ grain) for males. Internally, 0.0008–0.022 gramme ($\frac{1}{80}$—$\frac{1}{30}$ grain). In continued use the dose must must be increased slowly.—*Merck's Bulletin.*

THE PATHOLOGY OF HIP-JOINT DISEASE, WITH ILLUSTRATIVE CASES.*

By H. AUGUSTUS WILSON, M. D.

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Gentlemen:—Permit me first to draw your attention to the names that are given to designate a disease that we have studied in part, and one which we intend to study still more thoroughly, as we have illustrative cases to present before you. These names must be familiar to you, so that you may understand the conditions that are meant when they are mentioned. They are

Hip-joint disease,
Morbus coxarius,
Morbus coxæ,
Coxalgia,
Chronic articular ostitis of the hip,
Coxo-tuberculose.

If one man tells you that he saw a case of coxalgia, and another a case of morbus coxarius, and another a case of morbus coxæ, you must understand that the same condition is meant. The names have been ascribed by various writers to indicate what they thought was the nature of the disease. I prefer the simplest name possible to describe a disease. "Smith's disease," or "Bright's disease," do not indicate the true condition which is present, and especially is this true of the so-called "Bright's disease." How singularly does this term fail to convey to the mind the various pathological processes, which are grouped under that heading, as a deserved compliment to the investigator and profound student! I prefer the name "hip-joint disease," because it tells us it is a disease involving the hip-joint. You can be more precise, and call it "chronic articular ostitis of the hip," but you should call a disease preferably by the fewest words, and the simplest, and, if possible, by English words. So as to impress you more thoroughly with this disease, I will enter into a consideration of it in a manner directly opposite to the usual method of showing, first, the simpler, and then the graver forms of the disease, and finally the results. I will show you first the results, so as to impress upon you the necessity, as far as is possible, of preventing the condition which will, if neglected, result so disastrously. While I draw your attention to these names of the disease, you must remember

* Delivered at the Jefferson Medical College Hospital.

that they are but the slightest indication of the serious character, as results of failure to make early diagnosis and the application of remedial measures too late to be effective, of the cases which I shall bring before you.

The cases I present to-day show multiple deposits of tubercular bacilli in the bones. The little girl I showed you at our last lecture suffered from tubercular deposits in the soft tissues. This boy comes to us as a case of tubercular caries of the spine in the lumbar region; subsequently he developed on the right side a tubercular hip disease. It is not unusual for these conditions to be present in the same patient, for multiple deposits of tubercular tissue are frequently observed; thus there may be phthisis and a hip-joint disease in the same patient. This boy presents an illustration of the unfortunate results of this disease. Just in front of Pupart's ligament there is a sinus, which is the characteristic tubercular sinus, having the clearly punched hole. Around this are unhealthy granulations, the entire surface being covered with an ichorous, unhealthy pus of a greenish tint, the color of pus coming from a tuberculous caries. This sinus undoubtedly leads to an abscess and dead bone. As far as we are able to obtain the history of this patient, the opening occurred spontaneously, and the sinus will remain open as long as the diseased tissue remains, or until there are efforts made to eradicate the carious bone. Upon the side of the thigh there is a long cicatrix, and in the gluteal region we find another sinus. The long cicatrix followed an attempt at excision of the head of the femur. As to whether the operation was a success or not, I have merely to mention the fact that pus is exuding from the sinuses. These sinuses are indicative of a breaking down of the bone tissue, and do not prove by any means that an inappropriate operation has been performed. The extensive character of the infection rendered it impossible to remove all unhealthy structure at the time of the operation without serious and unwarranted risk to the patient. By an inappropriate operation, I mean an operation which was attempted to be performed, but was from necessity not thoroughly satisfactory in accomplishing the desired result. Thus, an excision of the head of the femur would be inappropriate when a large part of the ilium was diseased, the removal of which would be impossible. The marked difference in the calibre of the legs is due to an atrophy of all the muscles from their disuse. You will notice that in moving the boy, the pus wells out from all the sinuses, showing that the tissues are full. The marvel is that the boy is in his present good condition. The constitution stands the strain far better than you could imagine, but we must bear in mind in the analogous cases of consumption how patient and hopeful such patients are often for years.

HIP DISEASE WITH MULTIPLE SINUSES.

The next child was before you for a few moments at our last clinic, and I bring him before you now to emphasize some points I am desirous that you should understand. This patient is a chronic runner from one hospital to another. He stays at one place long enough to begin at improvement, and then starts anew at another place, where his mother has heard that a brighter prospect exists for his recovery. He has a tubercular deposit in his right hip-joint. There is a long cicatrix anteriorly, which was made some years ago, when a large abscess was opened and cleansed, but no dead bone found. Subsequently an opening on the outer side of the leg below the trochanters occurred spontaneously, discharging an excessive accumulation of pus from the hip. The entire leg was œdematous at the time, in fact almost erysipelatous. Quite recently, upon his entering the hospital, we endeavored by conservative means to accomplish a closure of the sinuses. We did this by means of the iodoform emulsion, and the sinus, as a result, is now almost closed, with no discharge of pus; but I see now, for the first time, a fresh swelling and redness on the inner side of the thigh, indicating a fresh deposit of tuberculous pus. I wish you to bear this case in mind as an illustration of the fact that we will not get the brilliant results in an excision of the tubercular joints that are obtained in much of the other surgery of the present day, and the explanation is that tubercular deposits are often submitted to operative procedure at too late a stage of their progress when complete removal is impossible.

I consider it a matter of the greatest importance that you see the results which so frequently follow this disease, in order that you may understand the reason for the stages of the procedure which I shall give you in detail later. The next case is a most profound example of the results which follow surgical attempts too late to be effective. The boy, as you see, comes in on a crutch and a cane, smiling, and yet he possesses a leg which has been a source of great anxiety to the surgeons who have treated him, as to know just what to do for him. Three years ago he presented himself with several sinuses around the joint,

and pus exuding to such an extent that the radical operation of excision was performed. The head, neck and trochanters were removed, and the parts healed well. Subsequently other sinuses appeared, and the entire wound became a tuberculous mass. These sinuses extended to the lumbar region and appeared all around the joint. At present there is a slight amount of exudation of broken down tissue. Shortening has resulted and you see here a result which is not pictured in the books. This case case shows what may take place, and always does take place, when the operation for excision is performed too late to achieve the desired purpose. There is a sinus anterior to the site of the greater trochanter, and one within near the groin, which is still running. The atrophy and shortening are marked. As the boy stands on his healthy leg he is able to swing the diseased limb to quite a considerable degree, but you will observe that the motion is not of the hip-joint, but at a compensating point in the lumbar region. Nature's efforts are to supplement a destroyed joint by providing another joint which will supply the motion lost by the disease in the joint.

PATHOLOGY OF HIP DISEASE.

Now then, gentlemen, what have we seen? We have seen something by name, let us get a clear idea what the name implies. I do not know how far I am teaching the views of the professors of surgery, but I am endeavoring to teach the modern views of the pathology of these cases. I am opening myself to criticism, I know, when I make the statement that in 95 per cent. of the cases, coxalgia begins in the ephthyses of the head of the femur. Some teach that the origin is in a synovitis; others that it is in the ligaments, and others that it is in the cartilages or in the ligamentum teres. During the last ten years under the methods of aseptic surgery it has become possible to perform operations which have hitherto been impossible. Up to that time and instead of being able to study the pathology of hip disease in its initial stages, we have been compelled to study results, and, by analogy, trace back the condition to the original cause. During the past ten years, however, surgeons have removed the head of the bone in the incipient stages. They have removed the head on the first indication of any serious lesion of the hip, and have found that in a very large proportion the disease began as an ostitis in the epiphyses of the head of the femur. This is a matter of positive fact, so we may lay aside as less important the theory that it can occu r in the tendons, the synovial membrane and the cartilages.

The osseous origin of hip-joint disease is advocated by Gross, Annondale, Marsh, König, Gibney, Volkmann, Bryant, Barwell, Bradford and others, while Sayre and Billroth are among those who teach synovial origin, and the ligamentous origin is favored by Owen, Holmes and Adams.

In sixty-one excisions of the hip performed by Muller, the osseous origin was determined in forty-seven, and synovial membrane in three, while it was impossible to tell accurately in eleven.

Since the discovery of the bacillus tuberculosus by Koch, are cognized change has occurred in the pathology, and now it is becoming an accepted fact that in the very large proportion of cases, the primary origin is in the form of an ostitis. Around the Haversian canals through which nutrient blood vessels pass, there are lacunæ seen under a 1200 diameter microscope, and from these lacunæ, caniliculi run out in every direction, communicating with each other and with the Haversian canals. The nutrient material of the bone comes from the perivascular lymphatics in the central canal and through the caniliculi from one lacuna to another. The Haversian canals become dilated and absorption of bone takes place and the surrounding bone tissue becomes spongy.

The Haversian canals become obliterated in chronic inflammation by deposition of inflammatory deposits, and often the bone becomes very hard and much thicker. In tubercular infection, the deposition of the bacilli takes place in the lacunæ and caniliculi; the bone becomes spongy and there is an increased tendency to degeneration. The process is hyperæmia, infiltration, absorption of trabeculæ and the formation of the enlarged spaces or cavities which become filled with cheesy matter.

Up to this point the progress of the disease is so insidious and the external manifestations so imperfectly marked that discernment is always difficult and often impossible.

From this condition, one of three courses are possible. First, the diseased process may be absorbed, and evidence of this having occurred has been found in pathological specimens.

Secondly, the growth of the deposit may take place towards the periphery, rupture through the periosteum and evacuate itself outside the bone, and be either absorbed from that situation or spontaneously open

through the skin. The latter is often prevented by a timely incision, and the sinus which is apt to be a result of spontaneous opening is thereby avoided.

The third possible course is, I believe, the most common, and gives rise to all of the symptoms and conditions known as the incipient stage of hip disease, namely, rupture of the tubercular ostitis into the joint cavity, thereby affecting that serous tissue with a purulent synovitis.

In proof of the fact that the disease usually occurs in the epiphyses, I wish to show you some specimens of excised heads of femurs. In the first specimen, I ask you to observe with great care that the rotundity of the head is destroyed, and that on the great trochanter the cancerous tissue is seen, showing that at the outset of the disease there was a disease of the bone necessitating the operation. In the second specimen the entire head and neck have been destroyed. An anatomist could scarcely tell what this bone is. The extensive inflammation has also invaded the trochanters. This third specimen, which was removed in adult life, goes just a step further; it shows a smooth head, proving that there was no serious inflammation of the synovial membrane. Just within the head of the bone you will observe this pocket where the original disease existed, rupturing into the joint. Excision took place prior to serious joint invasion with a happy result.

The progress of the pathological changes after a purulent synovitis has been set up are thickening of the capsule, infiltration of the periarticular tissues, thickening of the end of the bone, and formation of abscess. At this point the articular surfaces becomes eroded, and spontaneous luxation takes place, and if the case is untreated, cold abcesses continue to discharge through sinuses, which some times spontaneously close, only for new ones to form. The worst feature is that of which I have already shown you illustrations, namely, the dissemination of general tuberculosis, not infrequently life being terminated by tubercular meningitis.

Thus you will see the great importance of an early recognition of a disease which can be so successfully treated in its incipiency, but which is sure to produce most disastrous conditions if neglected.

I have purposely urged you to study hip-joint disease in the way we have done, so that I might this morning rivet your attention upon the care which is necessary in dealing with the incipient stage of the disease. The *incipient stage* is that period in which the first symptoms of the disease are present. The disease may be, and often is, present long before we are able to discern it by any known methods. It may exist as ostitis for weeks and months without our knowledge, and only be manifested when a synovitis develops itself. The earlier immobilization is applied to hip-joint disease the better will be the result. The truth of this assertion may be seen in those cases which have been allowed to run along, without early immobilization. I believe that in cases where a reasonable doubt exists in the diagnosis that it is judicious to resort to immobilization and await the developement of a certainty rather than to adopt the more common plan of letting the disease develop into a stage that renders successful treatment far more difficult. There is rarely any difficulty in diagnosis when decided purulent synovitis is present, and no credit is due to the one who then recognizes the lesion. The real difficulty lies in perceiving the character of the malady at the earliest possible moment. I believe that sensible parents will esteem you far more highly if you adopt the plan I refer to than to try to conceal your inability or the impossibility to make a diagnosis by recourse to statements that it is only growing pains, sprains, inflammation of the knee-joint, or other statements intended to be soothing. The full development of the disease, notwithstanding the comforting assurances, will be sure to bring you to reproach, and if you have a live conscience to cause unceasing self-condemnation.

If you feel restrained from immobilizing a healthy joint from any fears of ankylosis, let me comfort you with the assurance that in the treatment of ostitis of the hip immobilization has been maintained for a year at a time without ankylosis, and not in one case, but many. Further, that early ankylosis in the proper position as a sequel to hip disease should rather be sought than avoided. In this attempt there will be an entire avoidance of traumatism of motion and a more speedy arrest of the progress of the disease.

PICRIC ACID IN MOIST AND IMPETIGINOUS ECZEMAS.

OINTMENT.

℞ Picric acid.....part 1.
Sulphuric ether, a sufficient quantity to dissolve.
Lanolin.....parts 30.
Use externally.

LOTION.

℞ Picric acid.....parts 1-2.
Sulphuric ether, a sufficient quantity to dissolve.
Rose water..... " 300.
Use externally.

— Cerasi, *Gaz. Med. di Roma.*

COMMUNICATIONS.

THE NERVOUS AND MENTAL PHENOMENA AND SEQUELÆ OF INFLUENZA.*

By CHARLES K. MILLS, M. D.,
PHILADELPHIA.

All practitioners have been struck by the prominence of nervous and mental phenomena in influenza, and much has been written, but mainly in a desultory way, about the symptoms of the disease which are referable to the nervous system, and its more or less persistent nervous and mental sequelæ. The part played by the nervous system in the etiology and history of the disease has been variously interpreted. One holds that it is a "nervous disease," without explanation; another describes it as pneumogastric neurosis; another as a neuropathy due to ptomaine poison. According to Blocq, cited by Church,[1] the primary infectious action takes place upon the nervous system during the disorder, while sequelæ are to be attributed to secondary infection from ptomaines. Cheston Morris,[2] of Philadelphia, advances the theory that the general symptoms of influenza may be traced to a derangement of function, or partial paralysis of the pneumogastric nerve, and that the affection is brought about by conditions of the atmosphere, which particularly tax the cardio-pulmonary apparatus which is regulated by this nerve, a view which, after all, relegates the disease to an atmospheric or infectious cause. Graves long ago referred the bronchial and pulmonary symptoms of grippe to lesions of the nervous power of the lungs, and Blakiston regarded it as a disorder of the nervous system, with concomitant derangement of the organs of digestion, circulation, etc. Levick,[3] who cites the last two authorities, holds that certain symptoms are produced when the poison is expended on the sensorium, and certain others when its influence is chiefly exerted on the respiratory centres.

The analogies or relationships between influenza and other diseases generally recognized as belonging to the nervous system, either primarily or because of the situation of their most notable lesions, have been strongly brought out by able writers, as by Levick, for example, who has even suggested that epidemic cerebro-spinal fever, or cerebro-spinal meningitis, may be simply a malignant form of influenza, a view to which he was led because of the resemblance in the symptoms of the two diseases, which differ in degree rather than in nature, and also because, for three centuries, the two have occurred coincidently or in close sequence.

Grasset and Rauzier,[1] in a monograph on the grippe of 1889–90, lay great stress on the enormous predominance of the nervous over the catarrhal elements in the epidemic, as evidenced in the high fever, great cephalalgia, the marked delirium, the widespread pain, and the excessive nervous irritability. They refer to cases communicated by M. Coustan, in which the entire symptomatology of the disease seems to have reduced itself to a horrible migraine. They review the literature, which shows that writers of various countries are unanimous in proclaiming the importance of the nervous element—referring to Austrian, Russian, Belgian, German, English, and Polish contributions.

According to Schmitz,[2] who read a paper on the subject before the Psychiatric Society, at Bonn, influenza is a disease of the nervous system with secondary involvement of the heart, lungs and digestive organs. In several hundred cases which he observed, the nervous sympsoms were always primary, followed in every case by secondary involvement of the other organs.

What seems to be needed is an analysis and practical grouping of the facts, almost too numerous to handle, which shows the important part played by the nervous system in the development, progress and results of the disease. How is the nervous system affected by influenza? What are its primary or direct effects on the nervous system, and what are some of the more persistent and permanent impairments, and how are these determined by the disease? What are its acute nervous and mental phenomena, and what are the most common sequences? What is the probable pathology of these states, and what treatment is best in view of the neurotic characteristics of the affection?

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* Read before the Philadelphia Co. Med. Soc., Jan. 13, 1892.

[1] Church: *Chicago Medical Record*, 1891.

[2] Morris: *American Lancet*, March, 1891.

[3] Levick: *American Journal Medical Science*, January, 1864, and republication in pamphlet form, with notes of the influenza of 1889-90.

[1] Grasset and Rauzier: *Leson sur la 'Grippe de l'Hiver*, 1889-90; Montpellier and Paris, 1890; Monograph of 98 pages.

[2] Schmitz: *Allgemeine Zeitschrift für Psychiatrie und psychisch-gerichtliche Medizin*, 179, 1891. Cited in *American Review of Insanity and Nervous Disease* December, 1891.

The briefest consideration of the subject brings forcibly to mind the fact that all diseases of infectious or toxic origin—epidemic, endemic, sporadic, or accidental—may strike any or all parts of the nervous system with a result which will be proportionate: first, to the virulence of the infecting agent; and, second, to the resistance of the individual, whether this is due to constitutional predisposition or to reductions the result of previous injury or disease. The microbes may differ, but a bond of union and close resemblance can be recognized between the effects on the nervous system of all contagious and infectious diseases, as variola, scarlatina, diphtheria, measles, whooping-cough, typhoid or typhus fever, leprosy, mumps, cholera, erysipelas, puerperal fever, influenza, or cerebro-spinal meningitis; of all of such constitutional and diathetic affections, as tuberculosis, gout, rheumatism and diabetes; and of all such toxic agents artificially introduced into the system, as alcohol, mercury, lead, arsenic, copper and poisonous gases. These diseases, these diatheses and these poisonous metals and gases produce, or may produce, nervous and mental phenomena of the same character, differing in degree in particular cases and for special reasons.

In all these affections at the time of acute onset, if the illness is of a serious character, such symptoms are present as great mental and nervous debility, irritability, restlessness, sleeplessness, or the opposite states of torpor, stupor, hebetude, or coma; delirium; vertigo or syncope; headache, browache, napeache, backache and limbache; pains of all degrees of severity referred to various nerve areas; hyperæsthesia of the skin, of muscle-masses, or confined to nerve-trunks or branches; spasms, local or general, and with or without unconsciousness; sometimes mental disturbance amounting to a true mania or melancholia. During the progress of such affections any one or several of these enumerated symptoms may be present. Supra-orbital pain, for example, may be the only prominent nervous symptom in a case of influenza; headache and backache in diphtheria; hyperæsthesia in mumps, diabetes, or gout; and mania in a case of puerperal infection. Any infectious or toxic disease may, in brief, produce the same symptom, syndrome, or train of phenomena; and—which is the main point—for the same reason, namely, because of the introduction into the system of an agent which directly and powerfully poisons nerve centres, and possibly also nervous conducting tissues.

Following all infectious, diathetic, or toxic diseases, moreover, or directly springing from them, common experience teaches that we may have great nervous or general weakness; forms of insanity of the depressive type; paresis and paralysis of every grade, from an affection of a single muscle to that of all the extremities, and even more; localized spasm or cramp; general convulsions; pains in nerves, muscles and joints, and losses or perversions of sensation.

These symptoms and conditions, which may occur at the onset, during, or after the subsidence of any infectious or toxic disease, are those which constitute the nervous features of the prevailing epidemic. I have introduced the subject in this way because it seems to me that it is this comprehensive grouping of generically similar phenomena which enables us to most readily grasp a subject even for practical purposes. We differentiate phenomena in our daily labor, which we can only understand by properly grouping them, and by referring them to a common or to related causes.

Any attempt to classify the nervous and mental phenomena of influenza must be attended with great difficulties. These are, in the first place, symptoms and conditions which, although manifested in non-nervous organs, are directly traceable to a nervous origin; secondly, affections which would be recognized by all as properly referred to the nervous system; and, thirdly, affections occurring in nervous tissues and organs, although, strictly speaking, not nervous diseases.

I will refer very briefly to the first of these classes, although of much importance. I will not, however, discuss the nervous origin of the fever of influenza, nor will I attempt to explain the catarrh, indigestion, etc., on some neurotic theory, as such a method might lead us anywhere, and for our present purposes would be unprofitable. I wish simply to emphasize the fact that some of the most prominent pulmonary, cardiac and vascular affections of influenza can best be explained on neural theories. Many personal observations have led me to the conclusion, not new, which has recently been well presented by Elliott,[1] of New Orleans, that the pneumonias of influenza are often due to vasomotor paralysis, that they are, in fact, forms of blood stasis or passive congestion from vasomotor paralysis, which, in its turn, is dependent upon the action of the infection upon the pneumogastric centres and the nervous system in general. A distinct difference can be made out between

[1] Elliott: *The Climatologist*, vol. I, No. 1, Aug., 1891.

the true pneumonic lung and this "grip-lung," as it has been termed by Elliott. Graves long ago attributed the œdema of the lungs which occurs in influenza to an affection of the vagus.

"The grip-lung," according to Elliott, "has a long and very varying condition of passive blood stasis unaccompanied by râles. If resolution occurs within three or four days, it is accompanied by large mucous râles, and no time is given for the slow appearance of bronchial breathing or bronchophony; but during the long continuance of the blood stasis, an exudation occurs, increasing slowly, which will give, in time, some bronchophony and bronchial breathing, but never so complete as in pneumonia. Resolution never occurs in these cases with the suddenness that characterizes it in acute pneumonia the condition passes off as gradually as it formed. The sharp, clear-cut and sudden phases of the pneumonic attack separate it clearly from the obscure, irregular and slow phases of the *grip-lung*."

Many disorders in various parts of the body are best explained on this theory of local vasomotor paralysis, although it is not necessary to attempt to force this explanation for all. Hæmorrhages, minute, or even of considerable size, occurring in diverse localities, as in the retina, membrana tympani, and internal auditory apparatus, or in the skin, or mucous or serous membranes anywhere, may be due to deficient vasomotor tonus. Brain, kidneys, liver, or pelvic organs may suffer from forms of passive hyperæmia, subacute or cronic, which are in fact due to forms of vasomotor palsy. Occasionally we meet with cases of vasomotor disorders of the extremities, such as flushed or pallid fingers.

Even tropic affections have occasionally been observed. Wilson,[1] for example, refers to gangrene of the lungs as one of the less common complications. Abscesses of the limbs have been recorded. Grasset records two observations of eschars occurring in young subjects in the absence of prolonged decubitus. The greater tendency in surgical cases to suppuration may have its best explanation in the depression of healthful vasomotor and trophic influence.

The peculiar forms of pulse, and the uncertain or perverted action of the heart, extending in some cases to cardiac palsy and death, are in a strict sense nervous phenomena due to paralysis, partial or complete, of the inhibitory apparatus of the heart.

Let me take up those symptoms and affections which would clearly be recognized as belonging to the nervous system.

I believe with Church, "that the infection of influenza has a marked action upon the nervous system which may give rise to immediate acute manifestations or to remote and persistent conditions; and that in the predisposed, grippe is competent to cause marked excitement or great depression of the motor, sensory, and mental nervous apparatus."

Great nervous and mental prostration, both as an acute manifestation and as a persisting sequel, has engaged the attention and required the treatment of all practitioners. The mental depression, often present as an initial symptom, has been in some cases, simply overpowering. Some of the patients are affected like individuals whose mental and motor centres have been poisoned to the limits of human endurance, while still permiting the retention of consciousness. In other cases even consciousness itself has been overwhelmed.

Not a few patients who suffered from attacks of influenza during the early period of the present epidemic are still victims of profound neurasthenia. I refer now to cases which are not distinctively of the melancholic type. These neurasthenics are unable to endure a fair amount of work; their nervous forces are soon routed; they are weak, worrisome, and unrecuperative. The cardiac weakness which has been left is undoubtedly in part the cause of this neurasthenia, and with reference to this Church says that "the persisting neurasthenic condition, which so usually follows influenza, is attributed by some to cardiac weakness of nervous origin, and this contention is not without weight, if it is observed that even after appetite, sleep, body-weight, and physical functions have been long restored, the slightest exertion immediately produces disproportionate fatigue accompanied almost invariably by either a retarded or more frequently accelerated pulse, and rarely by præcordial distress and even by angina pectoris."

Curtin and Watson,[1] whose experience in influenza has been enormous, say that although general nervous prostration often extended over long periods without any discoverable local cause, it was always worth while to examine the urine with care. "Sometimes a nephritis, sometimes a faulty digestion or hepatic inaction seem to underlie the general condition in latent form. These cases, by enforced rest and attention to local complications, gradually recovered. These

[1] Wilson: *American System of Practical Medicine*, vol. I., p. 870.

[1] Curtis and Watson: *The Climatologist.*

cases, and nervous cases generally, were very disappointing when sent to the seashore during convalescence."

Among organic nervous diseases which have developed during the influenza or have been left in its wake, are in the order of their frequency, so far as my personal observation has gone, neuritis, meningitis, myelitis, and cerebritis, or various combinations of these inflammatory affections, as, for example, concurrent neuritis and myelitis, meningo-myelitis, or meningo-encephalitis.

Probably no single affection of the nervous system has been so common during and after the grippe, and particularly as a sequel of the disorder, as neuritis. Almost every variety of neuritis, as regards location and diffusion, have been recorded, and have come under my personal notice. Multiple neuritis, while not common, has not been rare; and I have seen a concurrence of this affection with poliomyelitis in the same case. Isolated neuritis of almost every cranial nerve has been recorded, with such resulting conditions as optic atrophy, loss of smell and of taste, opthalmoplegias, both internal and external; oculomotor, facial, and bulbar or pseudo-bulbar palsies of various types, including true pnuemogastric paralysis. Several cases of specially located affections of the sympathetic ganglia or nerves have been recorded. Of the forms of local neuritis most common might be mentioned the supra-orbital, intercostal, sciatic, and plantar.

An interesting case of neuritis, with a myxœdemoid condition of the limbs, presented herself at the Philadelphia Polyclinic recently. She had a sharp attack of influenza five weeks ago, having been in good health up to that time, except five years since when she suffered for several weeks with inflammatory rheumatism. On recovering from the influenza, the attack not having been especially marked with nervous symptoms, she was extremely weak in the legs, and was scarcely able to drag herself around. In a few days her feet and legs began to swell and to be painful, and soon became of enormous size and exquisitely tender. She has gradually improved, but still has a condition of firm swelling, which does not pit on pressure, from her knees to her ankles, and she also still has great tenderness on squeezing the feet or ankles, or in handling the nerves or the muscles of the limbs. Shehas no cardiac affection.

The articular pain, and other so-called rheumatic manifestations so numerous during and after attacks of the grippe, are, after all, best explained on the theory of infectious neuritis or myositis.

These cases, with articular and other pains, and with swelling, recall the endemic or epidemic form of multiple neuritis, known as beri-beri, in which the chief phenomena are œdema and paralysis of the limbs, with marked pain, hyperæsthesia and paræsthesia, followed later by anæsthesia, lost knee-jerk, and depressed electrical reactions. Myositis certainly, and probably also periositis, occur as complications or sequences of the influenza, and usually in association with neuritis of some type.

Many of the reports speak of the frequent occurrence of various neuralgias. Doubtless a distinction is seldom made by observers and recorders between neuralgia and neuritis, which are or may be separate affections. Practically these cases should be regarded as neuralgic in which pain is referred to certain nerve lines or radiations, but in which pain on pressure, and the other phenomena of neuritis, such as anæsthesia, vasomotor and trophic disorders, and even paralysis, are absent. In my own experience the cases which could properly be diagnosticated as neuritis are by far the most common. The distinctively neuralgic pains are probably due to .toxæmically depressed or exhausted sensory nerve-roots or centres in the cord and bulb.

Of diseases of the spinal cord proper, occurring as complications or consequences of influenza, the reported cases are not numerous, but they are none the less important. A few cases of myelitis have been put on record by native and foreign observers—one that I recall in which all four extremities were paralyzed. As would be expected, in accordance with the analogies with other infectious and toxic diseases, anterior poliomyelitis is the most common type. I have had several cases of temporary paralysis of one or more limbs, which, owing to the absence of pain and of cerebral symptoms, were apparently spinal in their origin, and probably light forms of inflammation. Concurrent multiple neuritis and poliomyelitis has already been referred to as having been observed by me in one case, in which the neuritis, which was not severe, soon disappeared, but a limited paralysis, evidently spinal in character, was left behind.

Several observers having reported cases of bulbar paralysis, and one striking example of this disease, attributed to the grippe, has come under my own observation, although exactly how far the influenza was responsible it is difficult to say. This patient, a clergyman, had a severe attack of influenza in May, 1890, and during its progress continued to

work and ate but little. In a very short time he noticed he was losing power in his hands, which soon atrophied. In January, 1891, he began to have difficulties of speech, and, briefly stated, the case went on until November, 1891, when he was first seen by me, his symptoms were those of well-marked bulbar paralysis, with progressive muscular atrophy, chiefly involving the upper extremities.

In accordance with analogy, we would expect the occasional occurrence both of nuclear polioencephalitis, and even rarely Strumpell's cortical polioencephalitis. One or two of the few cases of probable polioencephalitis of the latter type have occurred in patients suddenly stricken with fever, loss of appetite, and other symptoms which may have been due to infection.

Priester[1] has reported the case of a man fifty-four years old, who was taken with influenza in February, and in the beginning of March was seized with extremely violent headache which resisted all medication, and later the patient became deeply somnolent, remaining in this condition for four weeks; he could be aroused, but was apathetic and soon slept again. Reflexes and temperature were normal; pulse from 40 to 60. The patient had no paralytic symptoms, and slowly improved. His affection, according to the reports of the case, closely resembled Gerber's disease — paralyzing vertigo — although the latter is a disease of the warm weather. Tumor could be excluded by the absence of all fœcal symptoms a year before the attack. The most probable cause he believed, was a pathological process, involving the central gray matter of the third ventricle, which would bring the disease into close relation with polioencephalitis of the nuclear type. Dr. G. J. Kaumheimer, who translated this report for the *Review of Insanity and Nervous Disease*, December, 1891, observed an exactly parallel case which originated in April, and lasted into July before recovery took place.

That meningitis, either cerebral, spinal, or cerebro-spinal, occurs during the decline of the influenza cannot be doubted in the light of the evidence which has been presented by various observers, and particularly during the epidemic of the last three years. It is, however, a comparatively rare concomitant or complication. Some of the facts adduced as proofs of the existence of meningitis, and some of the cases reported as examples of the disease are clearly instances of improper interpretation. The intense cephalalgia and rhachialgia; the atrocious pains variously localized in the face, trunk, limb-nerves, muscles or joints; the vigilant delirium, with hallucinations and delusions, sometimes assuming great gravity; the intense vertigo, with or without nausea and vomiting—these and other well-known nervous manifestations which are so prominent in many cases at the initiation of the disease, are not necessarily evidences of meningitis, or even of meningeal hyperæmia. Rather they are due to an overwhelming toxæmia of the nerve centres and of the brain. Severe and terrible in character at first, they frequently pass away almost as rapidly as they came, which would not be the case if they were the evidences of a true meningitis. The enormous prostration which is left behind shows that the centres of nervous energy have been subjected to a depressing agency of great virulence, not that merely enveloping membranes composed mainly of fibrous tissue and blood-vessels have been congested or inflamed. No reason could be given why such congestion or inflammation should leave such results.

The reports of cases terminating fatally because of meningitis, and even the reports, personal or official, of the frequent occurrence of this affection must be received cautiously, and sometimes incredulously. They are only to be relied on when confirmed by autopsies, or when from observers who are accustomed to closely differentiate the meaning of nervous symptoms, and particularly of pain.

It may also be worth while at this point to refer to the somewhat frequent diagnosis of chronic meningitis as one of the sequelæ of the disease. This diagnosis is usually made because of the presence of more or less persistent pain in or on the head. Experience has led me to believe that this pain is usually neuritic rather than meningeal. Even deep-seated intra-cranial pain does not necessarily indicate meningitis. They may be due to neuritis, just as certainly as a pain in the hand or foot. The fifth nerve has an immense distribution within as well as outside the cranium, largely to the dura mater, but also to other tissues and parts. It is a pathological possibility to have dural neuritis without a pachymeningitis, and this is the true explanation of some pains, both acute and chronic, which are present in other diseases, as well as in influenza.

The form of meningitis most likely to be present in influenza is inflammation of the

[1] Priester; *Wein med. Woch.*,No. 27, 1159. In *American Review of Insanity and Nervous Disease*, December, 1891.

pia-arachnoid, or soft membranes, now often designated lepto-meningitis. From observations, corroborated by autopsies, I know that this affection may exist without pain; while pain of varying degree of severity, and usually intense, is practically invariable in pachymeningitis. Lepto-meningitis, however, is not usually without pain and hyperæsthesia as symptoms, but it may be absent, and its presence or absence will depend upon the location, extent, grade, and complications of the meningitis.

While believing that these criticisms upon the sometimes hasty, and the too frequent diagnosis of meningitis in influenza, and, indeed, in many other infectious and febrile diseases, are just and can be sustained, it remains true that a genuine meningitis, sometimes of malignant type, may appear during the progress, or closely following, influenza. Some very competent observers have reported cases of this character, and in a very few instances the diagnosis has been confirmed by autopsies. The diagnosis should be made to hinge upon the signs and symptoms which would be satisfying as to the occurrence of meningitis from any cause; not alone on the presence of such phenomena as headache, vertigo, and vomiting, but on such more convincing manifestations as optic neuritis, and localized spasms or palsies, either cortical or of cranial nerves.

The fact that meningitis, and even the cerebro-spinal form, does occasionally occur in influenza, is by no means proof that this disease and epidemic cerebro-spinal fever are identical. It simply emphasizes the point with which I started, namely, that every infectious or poisonous agent introduced into the economy may produce the same or similar pathological results in the nervous system. Largely according to the vulnerability, special or general, of certain tissues and organs, will be the preponderance of this or that form of so-called disease—for instance of neuritis, myelitis, meningitis, cerebritis, or of combinations of these affections. All infectious and toxic diseases give neuritis as the most common acute or chronic inflammatory manifestation, although myelitis, cerebritis, and meningitis may occur. Even in cerebro-spinal fever, as I was perhaps the first to point out, multiple neuritis is a common complication; but the infection being virulent and overwhelming, we may not only have mengigitis, but even meningo-encephalitis, or meningo-myelitis, with all their malignant phenomena and permanently disastrious results.

Vertigo is another symptom, like pain, often improperly referred to meningeal or cerebral inflammation. It is sometimes due to such disease, but occurring in influenza it may arise from other causes, as, for instance, from extravasations into the labyrinth or other portions of the auditory apparatus.

Müller[1] reports the case of a man, 50 years old, who, after influenza, presented great physical exhaustion. In a few weeks his mind seemed affected, and he became somnolent, so that he could be roused only with difficulty, and would then fall asleep again. In this respect the case was much like the one reported by Priester. Pain upon pressure was present over the vertebræ, the neck was rigid, the pulse was small and irregular, the skin reflexes were diminished, and the tendon reflexes were absent. In two weeks he began to improve. The author believed the case was one of spinal cerebro-spinal meningitis, similar to that seen after infectious diseases.

Without entering into discussion of their pathology or their peculiarities, I will briefly mention a few other forms of nervous disorder, occurring during or as apparent sequelæ of the influenza, examples of which have come under my personal observation. Convulsions have been reported by various observers, and in a few instances the convulsive habit has been established, and the patients have remained up to the time of report as cases of epilepsy. I have seen two such cases. Hystero-epilepsy and other grave hysterical phenomena have been initiated, or have recurred in cases in which the symptoms had long been dormant. Of local spasmodic affections I have seen no records, but one case of persistent clonic torticollis, with some pain and tenderness in the spinal accessory distribution, has been in attendance at the Philadelphia clinic. Two cases of facial paralysis, occurring immediately upon the heels of influenza, have come under observation.

Many affections not of, but occurring in, the nervous system have been reported as complications or sequences of the influenza. These include such affections as apoplexy, due either to hæmorrhage, thrombosis, or embolism. One of my Polyclinic patients, a man thirty-seven years old, was attacked with influenza in January, 1890. He was not confined to bed, but suffered severely from headache, cough and persistent general weakness, and in February he was suddenly paralyzed in the right half of his body, and completely aphasic. Well-marked cardiac murmurs were present, and the grippe in this and similar cases is probably causative by lightening up old endo-

[1] Müller: *Berlin klin. Woch.*, No. 37, 1890—cited in *American Journal of Insanity and Nervous Diseases*, December, 1891.

cardial trouble, or through the blood dyscrasia and general prostration which it leaves.

Various observers have reported cases of monoplegia and hemiplegia, without indicating the pathological character.

Recently, in consultation, I saw a typical hæmorrhagic apoplexy occurring in a case of influenza in a woman about sixty years old, who had previously been in fair health, and was not known to have had any disease of the kidneys or heart, although her vessels were somewhat atheromatous. Dr. S. S. Prentiss,[1] of Washington, has reported three cases of cerebral apoplexy occurring during the progress of the influenza: one was a man of fifty-seven years of age; another in a man of eighty-seven; a third in a woman of sixty-seven. One of these was probably hæmorrhagic, the other two, from the histories, were probably from thrombosis. In cases of this character the infection of the disease acts to bring about an apoplexy both by the changes which it produces in the blood, by its effects upon cardiac actions, and by the general debility induced. Such apoplexies might occur from other depressing causes; they are to be regarded not as phenomena, but rather as accidents of the epidemic.

Uræmic convulsions in patients suffering from chronic Bright's disease have been precipitated by the influenza, and it has seemed to me to have been active in lighting up lurking syphilitic diseases.

In one case of paretic dementia of somewhat irregular type, seen in consultation, the initial symptoms of the disorder were observed soon after recovery from a severe attack of grippe, the wife and friends of the patient in fact attributing the mental disorder to this attack. The probabilities are that syphilis was present, but latent, prior to the epidemic.

Purulent meningitis and brain abscesses have been somewhat frequently noted in connection with the numerous instances of purulent otitis media.

The relations of influenza to insanity have not received much attention from writers. Mairet,[2] of Montpellier, has recently published a lecture on the subject delivered at his clinic for mental and nervous diseases. Rush, who is referred to by Mairet, speaking of the epidemic which lasted from 1789 to 1791, and particularly of the year 1790, mentions that several persons were stricken with symptoms of insanity, and that one attempted suicide; he also speaks of several having had hallucinations of sight. Bonnet, reporting on the epidemic of 1837, cites one case which was stricken with a furious mania as the result of the grippe; and Petrequin, referring also to the same epidemic, records several patients tormented by melancholy ideas, and states that four or five suicides were accomplished or attempted at the hospitals in Paris.

The following conclusions compress into small compass so much that is valuable, with reference to the relation between influenza and the psychoses, that I cannot do better than quote them. They are reported as the conclusions arrived at by Dr. Leledy, and were presented to the Medical Society of London by Dr. Savage:[1] 1. Influenza, like other febrile affections, may establish a psychopathy. 2. Insanity may develop at various periods of the attack. 3. Influenza may induce any form of insanity. 4. No specific symptoms are manifested. 5. The roll of influenza in the causation of insanity is a variable one. 6. Influenza may be a predisposing or exciting cause. 7. In all cases there is some acquired or inherited predisposition. 8. The insanity is the result of altered brain nutrition, possibly toxic. 9. The onset of the insanity is often sudden, and bears no relation to the severity of the attack of influenza. 10. The curability depends on general rather than on special conditions. 11. The insane are less disposed to influenza than are the sane. 12. In rare instances, influenza has cured psychoses. 13. The insane may have mental remission during the influenza. 14. There is no special indication in treatment. 15. Influenza may lead to crimes and to medico-legal issues.

I can indorse from experience almost every one of these conclusion. With reference to the statement that no specific symptoms are manifested, it should be said that while this in a general sense is true, the most frequent type is a form of melancholia.

The cases of active insanity have been observed at the onset of influenza and during its height, but more particularly during its period of decline and convalescence. The published cases had been recorded chiefly as instances of acute mania or melancholia. The commonest type of grippe mental disorder, as I have just stated, is a form of melancholia or lypemania; but as this not infrequently assumes the form of melancholia agitata, it is often regarded as mania by practitioners not accustomed to differentiate the varieties of insanity. These patients are intensely depressed and emotional; they are filled with

[1] Prentiss: *Medical News.* August 29, 1891.

[2] Mairet: *Grippe et Alienation Mentale.* Montpelier and Paris, 1890.

[1] Savage: *Lancet,* No. 3558, and *Medical News,* January 16, 1892.

apprehensions of disgrace and ruin; they believe that they will never recover their former health; they are suspicious and delusional with reference to those who surround them; they are frequently unwilling to eat, or to rest, or to take medicine, and in some cases they have definite delusions of terrible character, for the most part hypochondriacal or religious. They are frequently plagued with the thought of suicide, and some times make successful or unsuccessful suicidal attempts. They have been deprived, by the ravages of the disease, of mental and moral stamina. In the majority of these cases, but not in all, some hereditary or acquired predisposition is present. While, however, the grippe usually gives us mental disorder of special type—a form of delusional melancholia—under special conditions it may be the starting point or exciting cause of any variety of mental disorder, as mania, paranoia, paretic dementia, hebephrenia, etc., but I can no more than glance at this phase of the subject.

The investigations of Church show that in each year in Cook County, Illinois, the epidemic of influenza has been attended by an increase in the number of proceedings for the commitment of the insane, which he believes cannot be explained by increase or movement of the population of the county.

Of the influenza occurring in hospitals for the insane, I have had no opportunity for observation, except in connection with the insane department of the Philadelphia Hospital. A great disproportion has been observed between the number of cases occurring among the women and the men. One hundred cases are recorded as having occurred among four hundred and sixty female patients; and only three in a larger number of men. The disease did not prove particularly disastrous among these patients, only three deaths having occurred from pulmonary complications. The cases were, as a rule, not of severe type; less severe than in an equal number of sane patients.

K. Helweg[1] has recorded the results and action of influenza in the Asylum at Aarhus, Denmark, and Pritchard has translated and summarized this paper for the *Review of Insanity and Nervous Disease*, for December, 1891. The account is of such interest that I will give it in detail: "The disease appeared in the asylum January 4, a few weeks after it had first been observed in the neighborhood. Out of 520 insane, 41 were so severely attacked that they were confined to their beds. The disease seemed decidedly contagious. It spread with difficulty on account of the wards being divided one from another. Eight of the twenty-five wards were spared altogether. When a ward would be invaded, the disease would rapidly run its course, to proceed to another. The transmission of the contagion could be distinctly seen in the sick wards where those stricken down in the other wards would bring the disease with them and transmit it to patients there. Seven patients had pneumonia. A relatively large percentage (six) died, of which four were from pneumonia. Among these was a man with such a severe cerebral disease that he must be excluded (the post-mortem results in the remaining five, which were women, were all more or less similar). The most essential results were extreme hyperæmia of the cranial bones and membranes, where the dura and the brain mass itself twice presented fresh and strongly vascular pseudo-membranes with small hæmorrhages as well. The veins and arteries of the thinner cerebral membranes were filled to bursting with blood; the large basal arteries were so filled with coagula that they stood out like cords. or those of an injected specimen. The brain substance itself was very hyperæmic, and its consistence increased. The average weight of these brains was about the ordinary of those of Aarhus. The writer also gives the history of the man mentioned, and those of the three other cases where influenza could not be diagnosticated during life, including the post-mortem findings of a case of influenza in a (sane) nurse who died of pneumonia. Here also was great hyperæmia of the brain and its membranes, yet not so pronounced as in the insane cases. The writer has seen influenza accompanied by severe psychic symptoms. In a few cases, the condition resembled acute delirium, which, however, is transient, and seems easily controlled by antifebrin. On the contrary, in two hopeless cases of insanity the disease had such a favorable and curative action that they may be regarded as cured. In both cases there was pneumonia."

The epidemic influenza has impaired the *morale* of the community. Lack of spirit in work, and an apprehensiveness with reference to health, business and all matters of personal interest are abnormally prevalent. The hysterical have become more hysteric; the neurasthenical more neurasthenic. Hypochondria has displaced hopefulness in individuals commonly possessed of courage and fortitude. In brief, certain neuropathic and psychopathic features have been impressed upon the community. We cannot afford

[1] Helweg: *Hosp. Didende*, R. 3, Bd. viii., S. 729.

even to dismiss entirely from consideration the bearings of the epidemic upon the increase not only of suicides, but of other grave crimes.

Many interesting questions in connection with treatment might be discussed; but as the subject of treatment has been assigned in this discussion to Dr. Hare, I will only speak of one point.

The use in influenza of hynotics, narcotics, sedatives and motor depressants is a question of particular interest in connection with the study of the nervous and mental phenomena of the disorder. The views of practitioners and writers are here decidedly at variance. Serious mental and nervous complications or actual insanities occurring during influenza have been attributed to the too free use of such chemically powerful remedies, as phenacetin, antipyrine, antifebrin, choral, bromides, sulfonal and paraldehyde; and our older narcotics such as opium, hyoscyamus, conium and cannabis Indica, have also come in for a share of blame. Persisting conditions of nervous prostration, and chronic respiratory and cardiac neuroses, have also been charged to drugs. Undoubtedly such criticisms have some foundation, but it remains true that each of the remedies named has proved itself of some value in the treatment of influenza, and particularly of its nervous types. The enormous consumption of a drug like antipyrine is a practical argument both for and against its use. What Grasset has said of this remedy might with almost equal truth be said of almost any of the rest. "This agent," he says, "vaunted by some as a panacea against all manifestations of the disease, is considered by others a remedy absurd and irrational in all cases." The truth would seem to reside between these two extreme opinions."

NEW STUDIES OF SACCHARIN.

C. Kornouth (*Ber. d. Deutch. Chem. Gesellschaft*) reports as the result of extended experiments that saccharin notably hinders the fermentation of beer yeast, and virtually stops it so soon as the amount added reaches 5 per cent. Other micro-organism, however, appear to be less easily affected by the agent, and some are entirely indifferent to it. Administered, even in enormous doses, for a long time to dogs, ducks, hogs, etc., it had no apparent affect either upon the weight of the animals or upon their appetite for other foods. None of the animals showed any aversion to saccharin or to articles with which it was mixed, and which they ordinarily ate.

IDEAS OF LUKJANOW ON THE PATHOLOGY OF THE CELL.*

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Whether there is a fundamental difference between the pathological and abnormal is unknown. A sixth finger is sometimes given as an illustration of the abnormal only; but this may be due to a pathological process in utero. On the other hand, the basis of the pathological seems to rest in the last analysis upon the abnormal; or abnormal increase of the physiological. It may not be uninteresting therefore to follow Lukjanow in some of his ideas on the pathology of the cell.

A general pathology of the cell treats of the forms of functional disturbances in the life of the cell. Here we should distinguish sharply from pathological histology, the main object of which is to establish morphological laws. Cellular pathology has also to show how far functional disturbances may be derived from morphological changes. The constructing of the pathology of the cell is at first beset with numerous difficulties. Omitting morphological questions and passing over to physico-chemical characteristics of the normal cell, we must admit that concerning these latter we know very little. Yet behind the morphological structure stands the physico-chemical.

But an investigation of the pathology of a cell presupposes that the normal life of the cell is reduced to a series of more or less exactly determined functions. But such is not the case.

The ideas concerning the functions of growth, nutrition, multiplication, motion and feeling are very far from clear. There is rather a maze of contradictions. One of the greatest difficulties is that the relation between the morphology and function of a cell is for the most part a complete enigma. The most fundamental of all questions in cellular biology, is whether the cell is an elementary organism. The investigations of the present throw serious doubt upon this, and show that the cell is rather a complex organism, just as the bodies of the higher animals and plants are composed of cells. According to Altmann[1] the active "*granula*" are, like the cells themselves, living elements, capable of multiplication; the granule has

*Lukjanow, S. M.—Grundzuge einer allgemeinen Pathologieder Zelle. Leipzig, 1891.

[1]Die Structive des zellkerness Archiv. von Du Bois Reymond, 1889.

the same relation to the cell as the cell does to the whole organism. In certain cells according to Steinhaus,[1] the "*neucléole-noyau*" can be a parasite. The solution of the question as to what forces bring the moving parts in the direction of this or that nourishment seems to lie in chemism.

Cells have sensibility, the elementary form of psychical activity.

It is said that no lifeless object can be diseased; but from the mechanical stand-point no definite line can be drawn between lifeless and living nature; an irregularly formed crystal is like to an irregular growing diseased cell.

According to Virchow, the substratum upon which pathological manifestations play, is a repetition or reproduction of the normal morphological substratum; this shows that the fundamental principles of structure in the elements of newly formed pathological tissue are the same as in normal tissue. The pathological character of the morphological substrata consists in this, that they arise in an unfit way; at the wrong place or time; or they may diverge from the type of the body depending on an abnormal increase of the number of the tissue-elements ("*hyperplasia*"). Thus every heterology is either heterotopy (*aberratio loci*), or a heterochrony, (*aberratio temporis*), or merely a quantitative deviation, a heterometry, which rests upon an abnormal increase in volume of the single morphological elements—a *hypertrophia*. A neoplasm can be heterological as to tissue, place or mass. Heterology signifies a difference in species in the type of the development of the new as opposed to the old, or as one is accustomed to say in degeneration, deviation from the typical form (Virchow).[2]

The heteroplasia, in the narrow sense of the word, is a deviation of the type of development of the tissue, and not merely in the outer conditions of its genesis. Cohnheim has sought to reduce all to anomalies of embryonic development, which lead to a remnant of embryonic germs in mature tissue; but he succeeded only in gaining intimations. In short, there is no reason to assume in the cells an independent function with the task of a transforming character; the cells in pathological relations *preserve their specific character just as they do under normal relations.*

If a parallel incision to the long axis is made through a "stentor," yet not the whole length, the parts do not fall to pieces; each one forms the failing part anew, and in this way we obtain twin forms, whose end (behind or before) is doubled, while the other end remains single[1]. From this we see that teratological forms, at least in certain cases, are nothing else than results of regenerative processes, which followed from outward "*insulte.*"

The whole doctrine of the immortality of the monoplastidiæ is still a hypothesis, which needs further investigation; for the cell is very probably a complex whole.

Under pathological conditions, nothing new arises in the cells, either morphologically, physico-chemically or functionally. The pathology of the cell is contained *in potentia* in its physiology. The general biology of the cell will be complete when its normal and pathological physiology has been united into a harmonious whole. We call a certain phenomenon in the life of the cell diseased, if it proceeds with a tangible injury to the cell; that is, if the cell deviates from its normal way, and so much that the return to its path is either questionable or plainly impossible. In normal conditions cells in the organism die; but this is to be distinguished from their premature dying. In general, it can be said that the group of physiological phenomena is characterized by a general tendency to the maintenance of life; while the group of pathological phenomena shows a tendency to destroy life.

As before indicated, investigations show more and more that the cell is no simple whole but a compound one; the single parts which constitute its morphological structure are, to a certain degree, independent; accordingly the pathological disturbances in the life of the cell can be considered not only in relation to the cell as a whole, but also in relation to single elements in its structure.

Between the body and the nucleus of the cell, there exists a very close relation, whereby in the action between the two, the most importance is attached to the cell-body. The essence of this relation in its universal form can be reduced to the nourishing of the cell. It is very probable that the indirect transmission of nutritive matter from the nucleus into the body of the cell, is in the life of the cell as a whole of greater importance than the delivery of the products of life of the body to the nucleus.

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[1] Karyophagus salamandral. Virchow's Archiv., 1889 Bd. CXV.

[2] Cellular pathloogie.

[1] Gruber, Uber Kunstliche Theilungen ber Infusoren. I u. II Mittheilung Biology. Centralblatt. Bd. IV, Nr. 23, u Bd. V, Nr. 5.

A PROTEST AGAINST CARELESSNESS IN THE EXAMINATION AND TREATMENT OF FEMALE PATIENTS.*

By M. B. WARD, M. D.,
PROFESSOR OF GYNÆCOLOGY, KANSAS MEDICAL COLLEGE, TOPEKA, KANSAS.

The members of our profession are, as a rule, desirous of obtaining knowledge at any reasonable sacrifice of time and money. We, therefore, leave our homes, our practice, and often very sick patients, and wend our way to Medical Societies and Medical Centres and go out of our way to gather a little here and a little there, with the one purpose in view, viz.: The better to fit ourselves for the great responsibilities of the general practitioner or the specialist. The physicians' sacrifice of time, money and life's comforts to serve their *clientele* is not excelled by any other calling or profession. Our most intimate friends, and even our near relatives, have but a faint conception of the everyday toil and midnight study of the earnest, honest and busy physician and surgeon.

Most of the essays read at Medical Societies and lectures delivered in Medical Colleges are prepared when other people are in bed and enjoying their rest, while the physician is toiling and studying how best to relieve suffering, prevent disease and to save life. Whatever of profit there may be in carrying out this great scheme of life preserving, it cannot for one moment be compared with the comfort of knowing that what we have done for our patients was the wisest thing that could have been done, and that no one could have done better. This is a standard of perfection which we should all strive to attain. In spite of our endeavors, however, to do the right thing at the proper time, we often come short of the mark. The field is too large and the complications too numerous, and thus the necessity of dividing our work, that some may go East, and some West, some North, and some South, in search of truth and experience, and then come together at these various Medical Society meetings and unload at the feet of all the facts we each have garnered, keeping nothing back; and, after reviewing our work and comparing notes with each other, we disband to go out again to do better work, more good and to receive our reward. We do not always get credit for the good we have done—but often we are praised for bad work performed. I believe in the general rounding up the world is fair and is usually correct. We may deceive our friends sometimes, but not always.

It has been both my misfortune and pleasure to have had only recently two cases which will clearly illustrate the danger referred to. I say misfortune, because it is unfortunate to be called to examine and treat grave cases which have baffled other, and perhaps better, surgeons; and it is a pleasure, on the other hand, to be conscious that our diagnosis and treatment were correct and satisfactory. I have selected these two cases to report at this time for the following reasons: First, they gave unusually obscure histories of pelvic disease, which fact alone will, I am certain, convince you that these conditions are more common than formerly supposed; second, they both had been East to consult prominent men, and both returned home not benefited; third, they are physicians' wives, and the history of their suffering and relief comes home to us with more than ordinary emphasis; fourth, I have been urged by their husbands, both prominent men in our profession, to report these cases.

Mrs. Dr. S., aged 24, gave the following history: Born and raised in Kentucky, surrounded by all the luxuries of Southern life, she passed her girlhood without any serious illness. Her menstruation was often painful, but not serious enough to attract any special attention. She married at nineteen; gave birth at twenty. She was in fair health and strength until about two years ago, when she began complaining of her left side, much suffering during menstruation, insomnia, extreme nervousness, great tenderness in both ovarian regions, but worse on the left side. This state of things increased until she was taken to Louisville, Ky., and consulted a prominent professor in that city. She was assured that nothing was wrong with the uterine adnexa, but that there was a slight endometritis. She returned to her home in S——., in this state, and settled down to her fate, i. e., to suffer the balance of her life. She consulted me about two month ago, and upon examination I found quite a mass on the left side, an adherent uterus, great tenderness on both sides, with a history of two attacks of pelvic peritonitis.

I diagnosed her trouble double salpingitis and ovaritis with adhesions everywhere, and without hesitation recommended an early operation for removal of the left appendages, and perhaps, also of the right. As soon as the doctor could arrange his affairs, he came

* Read before the Golden Belt Medical Society, in Salina, January 7, 1892.

with his wife to Topeka, and I removed these tumors.

Mrs. S—— convalesced in twenty-four hours, was up and as well as ever in two weeks; and returned home, over two hundred miles, in three weeks after the operation. The signs of suffering so plainly marked in her face have entirely disappeared, and she is now a rosy cheeked, bright faced young woman.

The gratitude of the doctor and his estimable wife is unbounded.

Mrs. Dr. M——., age 39, gave the following history: As a girl she was surrounded by all the comforts of life, yet she had always been quite a sufferer at her menstrual periods. Married at the age of twenty-six; had not borne children, For a number of years had been constantly a semi-invalid.

Her suffering was confined principally to her back and sides. So nervous was she that the least excitement would make her quite ill. She had much trouble from irritation of the bowels, particularly the rectum. When unusually nervous there would be a constant tenesmus which often amounted to frequent mucus discharges that annoyed her extremely. This condition led her to conclude her trouble to be entirely rectal.

The doctor at last became desperate regarding his wife's condition, and took her to Pittsburg, Pa., to consult an eminent physician of that city. He examined her, and pronounced her trouble entirely rectal, and treated her by dilating the rectum. This put her in bed for some time, and yet, it seemed to help her subsequently. At least she was for a time somewhat improved. She was assured by the Pittsburg physician that there were no signs of diseased appendages. Since her return home she has been treated for rectal trouble by a second dilatation, which again caused her to be quite ill for some time.

Mrs. M—'s, condition gradually became more desperate, until she had given up all hope of recovery. I was called in to see her about November 15, 1891, and after reviewing her history as given by herself and doctor, I made an examination of the rectum, then the uterus and appendages through the vagina, and also a second time by the rectum.

I found a prolapsed and adherent right ovary. The tenderness of these organs made the examination quite painful. I had no trouble to convince them that the rectum was not, at that time, diseased, and so far as I could judge, never had been. The rectal irritation was due entirely to the prolapsed and adherent ovary which had drawn the uterus down in a retroflexed position and was holding it there. This position of these organs caused a constant dragging down on the rectum, and naturally constant suffering.

I recommended the removal of the left side without delay, and advised them that in all probabilities both sides were entirely destroyed by adhesions. The operation was done four weeks ago to-day, (Jan 7, '92), and the patient went home, or left the hospital in less than four weeks from day of operation.

The operation was one of the most difficult I have ever had. The left tube and ovary were greatly enlarged and universally adherent to each other. They were adherent to the intestines so that it was very difficult to separate them, it requiring all my strength to remove them. The right side was quite as firmly adherent as the left, and the pathological condition about the same. The fimbriated extremities of both tubes, you will see, were occluded by large sacs of cystic fluid. The operation confirmed my diagnosis.

The condition found, was, in short, prolapsed adherent and enlarged ovaries; double hydrosalpinx, with large cysts in the fimbriated extremities of the tubes, entirely shutting off communication between ovaries and uterus; retroflexed and adherent uterus; and intestinal complications.

Mrs. M—— has had no trouble with her bowels since the operation. She made an uneventful recovery, with the exception of a severe attack of *la grippe*. She was up and around the house in three weeks from the time of the operation. She is as happy as any one can be, unless it be her husband. In the place of care-worn features, she looks as bright and fresh as a young girl. This is not an over-drawn picture.

I could refer to a number of cases of this character, which have come to my knowledge recently, but these are quite sufficient to illustrate my point. The country is full of women who are suffering from these conditions, as only women can suffer. Let us, therefore, be more thoughtful in our diagnosis and treatment.

SULPHURATED LANOLIN.

Seibel of Germany heats together crude lanolin with 20 per cent. of sulphur to a temperature of 120° C., until the greater portion of the sulphur becomes dissolved. The decanted dissolved portion is heated to 230° C., or until hydrogen sulphide vapors begin to evolve. The product is of a dark brown color, and will be used in the manufacture of sulphur soap principally. Seibel obtained a patent.

DOES ETHER ASSIST DIGESTION?

The effect of ether on the digestive processes in healthy subjects has been recently investigated by Dr. Gurieff, who gave thirty drops of sulphuric ether to six healthy persons during dinner, which consisted of about half a pint of soup, four ounces of meat, and six ounces of bread. It was found that the ether had the effect of stimulating the action of the gastric glands, increasing the free hydrochloric acid in the gastric juice, and causing the peristaltic movements of the stomach, together with its power of absorption to increase, thus, on the whole, exercising a favorable effect upon the gastric digestion. The same result was obtained when the ether was administered by means of hypodermic injections. It would appear, therefore, that the effects must be ascribed to a general, rather than to any merely local, action on the mucous membrane of the stomach. Dr. Gurieff is disposed to think that there is a stimulation of the cephalic centres. This view is partly based on the observations of other Russian observers—Bekhtereff and Miloslevski, and Pavloff and Shumova-Simanovskaya—on the dependence of the gastric functions upon the central nervous system.—*Lancet.*

THE CONSTITUTION OF THE SWEAT.

From a study of the constitution of the secretion of the sudoriferous glands, Gaube (*Comptes Rend. des. Séances de la Soc. de Biol.*, November 6, 1891) has found that the sweat is of acid reaction in man, but alkaline in the horse, the cow, the dog, the cat and the pig. Both in animals and in man the secretion contains albumen. The total amount of nitrogen in the sweat is greater than that represented by the contained urea; the excess is largely due to the presence of albumen and albuminoids. In man and in animals the sweat contains diastasic ferments, which are called hidrozymases. In man there are three—an amylase, a pepsin, and an emulsin. In the horse there are two, an amylase and an emulsin. The sweat of man contains little amylase, less pepsin, and still less emulsin; that of the horse and of several other animals contains less hidrozymases than does the sweat of man.

SELECTED FORMULÆ.

HIVES.

Dr. J. J. Liggett commends the following in the *Med. World:*

℞
Potassii iodidi.....3 v.
Vini colchici sem.....3 j.
Tr. cimicifuga rac.....3 ij.
Tr. stramon.....3 ss.
Tr. opii. camph.....3 iss.
M. Sig. From gtt. xv to 3 j, three times a day.

BRANDY WITH EGG.

To administer brandy to infants, Elroy recommends the following:

℞
Brandy.....f 3 i.
Cherry-laurel water.....gtt. v.
Yolk of egg.....No. ij.
Powdered sugar.....3 vi.
M. Sig. To be given in the course of a day, a small spoonful at a time.

—*Rev. de Clin. et de Thér.*

SEMINAL EMISSIONS.

℞
Potassi bromide.....ounce 1.
Tr. ferri chlor..... " 1.
Aqua pur.....ounces 3.
M. Sig. One or two teaspoonfuls in water one hour after meals and at bedtime.

—*Canada Lancet.*

SCIATICA.

Concerning this disease, Dr. Eliot, New Haven, Conn., makes the following suggestions (*New York Medical Journal*):

1. A large proportion of cases of sciatica are neuritis, and not simply neuralgia.

2. Temporary relief of suffering should be secured by hypodermic injections of morphine and atropine, or of theine.

3. Among curative agents, salicylate of sodium and iodide of potassium are especially valuable—the former in acute, the latter in chronic cases.

4. Considerable benefit may often be derived from the administration of the more purely neurotic drugs—aconite, belladonna and gelsemium, as:

℞
Ext Belladon., fl.....drachm ½.
Ext Aconiti., fl.....drachms 1½
Ext. Gelsem., fl.....ad " 6.
M. Sig. Give six, seven or eight drops every four hours.

5. Cantharidal blisters are of great service in promoting the cure of the disease, when used in conjunction with appropriate internal treatment.

HAIR WASH IN SEBORRHŒA CAPITIS

(particularly in women with long hair).

℞
Ether spirits.....parts 1000.
Benzoin tincture..... " 100.
Vanilin.....part 1.
Heliotropin.....parts 3.
Geranium oil..... " 2.
Use externally. Pour a tablespoonful on the head once a day, after washing (or without previously washing), and rub-in with a fine cloth. (Inflammable!)

—Leibrich, *Ther. Monat.*

PAINLESS DILATATION OF THE OS UTERI.

Dr. R. Lefour (*La Semaine Médicale*, No. 50, 1891) soaks his laminaria tents eight days in the following solution before using them to dilate the os uteri:

℞ Ether.....grammes 85.
Iodoform.....“ 10.
Cocain, pur.....“ 5.

He prefers the pure alkaloid, cocaine, to its salt, the hydrochlorate, as the anæsthetic action of the cocaine salts is less than that of the pure alkaloid.

IRRITABLE HEART.

The *Indiana Medical Journal* gives the following:

℞ Tinct. pulsatillæ.....♏ xx.
Tinct. verat. viride.....♏ xl.
Ext. chimaphila, fl.....℥ j.
Syr. limonis.....℥ ij.
M. Sig. Teaspoonful before meals.

ROUND WORMS IN CHILDREN.

The following (*Centralblatt für d. ges. Therapie*, No. 8, 1891) is praised as a useful rectal injection in cases of round worms in children:

℞ Naphthalini.....grammes 1–1 50.
Ol. olivæ.....“ 40–60.

STOMATITIS IN CHILDREN.

Where the trouble is extensive and painful, the *Province Médicale* recommends the following treatment:

1. The gums should be brushed with—

℞ Cocaine hydrochlor.....gr. iss.
Sodii chloridi.....gr. xv.
Glycerin,
Aquæ.....āā 5 ijss.
M. Use a camel's-hair brush.

2. A spray of a solution of boracic acid should be frequently used.
3. Bromide of potash internally.

ANTISEPTIC ADHESIVE OINTMENT.

The following is an antiseptic adhesive ointment used at the Hôpital St. André:

℞ Zinci oxidi.....gr. ivss.
Zinci chloridi.....gr. xxiiss.
Gelatin.....5 v.
Aquæ.....℥ viiss.
M.

The dressing protects the surface of wounds and dispenses with the use of bandages after operations. It is especially of service for the dressing of wounds on the face.—*Gaz. Heb. des Sci., August 16, 1891.*

ORCHITIS.

℞ Ammon. muriate.....drachms 2.
Sprts vini, rect.....ounces 2.
Aquæ.....“ 2.
M. Sig. Use as a lotion

—*St. Louis Courier of Medicine.*

ECZEMA OF CHILDREN.

The following formula is recommended for eczema of children:

℞ Bismuth subnit.....10 grammes.
Zinci oxyd.....2 “
Glycerini.....8 “
Acid carbol.....gtt xx “
Vaselin. albi.....30 “

or ℞ Bismuth subnit.....20 grammes
Zinci. oxyd.....5 “
Acid. carbol.....2 “
Vaseline albi.....0 “
M. S. Ext. use.

When there is much irritation and itching:

℞ Bismuth subnit.....5 grammes.
Glycerine.....20 “
Acid carbol.....gtt. xij “
Aquæ rosæ.....30 “
M. S. Shake well and apply with a soft brush.

—*Deut. Med. Woch.*

MATISM.

Dr. Hening (*Lo Sperimentale*, No. 18, 1891) praises the following:

℞ Salipyrin.....grammes 6.
Glycerin.....“ 14.
Syrup raspberry.....“ 30.
Ad. destillat.....“ 40.
A teaspoonful every half hour, only taken in the afternoon.

The pains and temperature diminish after the administration of this formula.

STRYCHNINE IN ALCOHOLISM.

Dr. Portugalow (*Lo Sperimentale*, No. 19, 1891) treats all forms of alcoholism with the nitrate of strychnine:

℞ Strychnin. nitrat.....cgms. 6
Aq. destillat.....gms. 15.
For hypodermic use. Inject once or twice daily, first 5 dgms. (7½ ♏), then 25 dgms (37 ♏).

Generally ten to sixteen injections are sufficient. Small doses of the bromide of sodium may be given simultaneously.

WHOOPING COUGH.

℞ Oil of eucalyptus.....grains 6.
Spirits turpentine.....“ 6.
Alcohol.....“ 45.
M. Sig. As an inhalation.

—*Dietetic Gazette.*

RHEUMATOID ARTHRITIS.

Prof. DaCosta prescribed the following treatment for a woman aged forty-five years:

℞ Ammonii iodidi.....gr iij.
Aquæ cinnamon.....f ℥ j.
M. Sig. Three times daily, with massage of the joints affected.

—*Coll. Clin. Rec.*

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LEADING ARTICLE.

UNUSUAL MANIFESTATIONS OF EPILEPSY.

It may safely be asserted that no other disease exists exhibiting such marked typical features as does true or essential epilepsy, which, at the same time, is so infinitely varied in its expression. Many other affections present themselves in varying ways, and often with but one of their characteristic features to enable us to recognize them, but from the typical epileptic seizure it is easy to count hundreds, almost, of other symptoms which clearly point to the same causative pathological state. As an instance of the absence of the chief symptoms of a disease we may point to exophthalmic goitre, in which the bulging of the eyeballs, or the thyroid enlargements may not be present, still we know that we have to deal with the same pathogenesis as if all three cardinal symptoms were clearly and typically observed. In like manner, in epilepsy we may find any of its clinical symptoms absent and still be certain that we have to deal with the same neuropathic disorder.

From time immemorial certain prominent symptoms of epilepsy have been considered as the striking features of the disease, and rightly so, for they are by far the most common and impressive. These could not be more typical: The well-known fall to the ground, preceded or not by cry or aura, complete unconsciousness, succeeded by convulsive contractions of the muscular system, and ending in a deep sleep. These symptoms have been, and are to-day, very generally considered as a *definition* of epilepsy. Where, however, a broader view is taken of all the symptoms which occur of undoubted epileptic origin, it is seen at once that any definition, including simply these standard phenomena, is wholly inadequate.

Let us briefly notice some of the more common modifications of the epileptic paroxysm. First, the convulsive movements may be absent in the attack. This is so in *petit mal*, which all authorities have agreed

upon as being an expression of essential epilepsy. In this form of seizure sudden loss of consciousness is the sole symptom. Convulsions are also absent in many other forms of epilepsy, which will presently be referred to. Loss of consciousness has long been considered one of the cardinal features of epilepsy, but in many cases of local lesion of the brain we know it is absent, and many cases have been reported in which, during the epileptic attack, consciousness was preserved. It may be objected that such cases should not be termed epilepsy, still it must be remembered that cases of local cerebral lesion are often attended by general convulsions, with complete unconsciousness, so that it may be impossible to clinically separate cases in which there is only local convulsions, without loss of consciousness, from cases having the same pathology and attended by general convulsions, with absolute unconsciousness. Therefore, the tendency of the highest authorities upon the subject is to use the term epilepsy, even if the convulsions are limited and consciousness is retained. Again, cases have been recorded in which a subjective sensation has been the only symptom of the attack. Thus, Dr. S. Weir Mitchell reported a case in which a loud sound in one ear was the sole symptom, and classifies the case as purely physical epilepsy. The deep stupor or sleep which usually follows an epileptic seizure may be very variously substituted, but most commonly by excitement, mania, automatic procedures, etc., or it may be very brief, or prolonged for days even, or, finally, it may be entirely absent. Some authorities (particularly English writers) lay stress upon the *aura* as being very commonly present in epilepsy, still all admit its varied character, and that in a large proportion of cases it is wanting. In a large class of cases it may be the main symptom complained of. Especially is this true where it takes the form of sudden and severe local pains in the head or in the cardiac region, in some cases of which the patients will only complain of sudden attacks of pain; thus, upon careful observation, momentary unconsciousness, with convulsive twitchings, more or less general, may be seen, and so lead to a correct diagnosis.

Under the term masked epilepsy a large number of cases have been described by different writers, in which the disease appeared in the form of unaccountable acts upon the part of the patients so afflicted, who afterward remembered nothing of them. These cases of what may be termed *epileptic automatism* are exceedingly interesting, particularly from a *medico-legal* standpoint. Thus, cases have been reported where the patient suddenly becomes unconscious, but is apparently in his normal condition, and may continue his work, or, as in a case reported by Hammond, may travel and transact business for days together, finally suddenly becoming conscious and unable to give any account of his actions. Very interesting cases of this rare form of epileptic seizure have been reported by Bucknill and Luke (*Psychological Medicine*, Ed. IV, p. 337), Legrund du Saull (*Etude Medico-legale sur les Epileptiques*, Paris, 1877), Hammond (*Treatise on Insanity*), Spitzka (*Insanity*), H. C. Wood (*Nervous Diseases*, p. 460), C. M. Hay, M. D. (*Journal of Mental and Nervous Diseases*, June, 1889), and others.

Another form of epilepsy which may properly be classed under the same head is running epilepsy or *epilepsia procurrens*. In this form of attack sudden fits of running, more or less prolonged and violent, may be the sole symptom. It is attended by complete unconsciousness, and if the patient is interfered with in this state, he may be extremely violent and commit any crime, or, as in a case reported by C. M. Hay, M. D., (*Journal of Nervous and Mental Diseases*, N. Y., June, 1889) the attack may assume the form of an ordinary attack of *grand mal*.

In an interesting paper descriptive of many unusual cases of epileptic phenomena, S. Wilks, M. D., F. R. S., consulting physician to Guy's Hospital, London, discusses the question as to whether coma or sleep may be the only symptom of epilepsy. He thinks it may be so, and cites several cases in support of this belief. Doubtless the literature on the subject will strongly prove that periodi-

cal attacks of coma should be classed as an epileptic symptom, of just as much significance as the brief attacks called *petit mal*, or the very varied manifestations classed together as *epileptic automatism*. If we admit that coma may be the sole epileptic symptom in any case, it instantly suggests the question as to the possibility of partial unconsciousness being at times due to the same cause. All are more or less familiar with the queer actions, the dazed condition, and the various subjective sensations which affect many cases of chronic epilepsy, and also with the different mental and physical states which follow fits in such subjects, varying from simple defect of attention to violent mania or profound coma, and from slight paresis to complete, but usually evanescent, paralysis of motor functions. How far these manifestations, when occurring alone periodically, are in accord with our definition of epilepsy is a question which must be considered as partially answered, at least, by many reported cases of unusual epileptic phenomena which have been considered.

The practical side of these states to the general practitioner is undoubtedly from the standpoint of diagnosis and treatment, while to the pathologist they open the most perplexing of problems for reasonable solution. How is it that the same underlying cause can produce such varied symptoms as the ordinary epileptic seizure, attacks in which any of the cardinal symptoms of the disease may be absent, masked epilepsy or epileptic automatic consciousness, periodic coma, running epilepsy, purely physical epilepsy, and attacks of mild uncontrollable epileptic mania? Certainly a completely satisfactory answer is not contained in any one of the numerous and ingenious theories regarding the physical basis of epilepsy, and the disease must still be reckoned among those which are chiefly of *clinical* interest.

A CORRECTION.

The name of the author of the communication in the issue of Jan. 30th, on Gumma of the Iris, is Florence Mayo, not Mays, as published.

BOOK REVIEWS.

COOKERY FOR THE DIABETIC, By W. H. & Mrs. Poole, with a preface by Dr. Pavy. London and New York, Longmans, Green & Co., 1891. Price, $1.00, cloth.

No one will gainsay that a most important part of the treatment of diabetes is in the patient's dietary, and that, as a rule, the afflictions of this class of cases are greatly increased by the intense wearisomeness of the plain unvaried diet to which they are subjected. The authors of this little book have endeavored to give to the diabetic a knowledge of the scientific principles on which the diet is based, and recipes for preparing such articles as come within the special dietetic range, so that they will not only be palatable and pleasing to the eye, but afford sufficient variety to avoid the horrible monotony ordinarially experienced. The book can be highly recommended.

A COMPLETE MEDICAL POCKET FORMULARY, also a special list of new drugs with their dosage, solubilities and therapeutical application; of formulæ for suppositories; formulæ for hypodermic medication; list of drugs for inhalation; tables of poisons with their antidotes; a posological table; a list of incompatibles; table of metric equivalents; brief account of external antipyretics, disinfectants, medical thermometry; urinary tests and much other useful information. By J. C. Wilson, A. M., M. D., physician to the German Hospital, Philadelphia, etc., etc. J. B. Lippincott & Co., publishers, Philadelphia, 1892. Price, $2.00

The number of new formularies that have appeared during the last few years, and the large sale which many of them have had, renders it evident that such works fill a decided want. Besides nearly 2600 formulæ there have been added various matters, as above alluded to, of immediate value in everyday practice.

Whatever Prof. Wilson does he does well, and we can say without hesitation that this latest production of his pen, although but a compilation, is of exceptional excellence, and by far the best work of the kind that has been brought to our notice.

LESSONS IN THE DIAGNOSIS AND TREATMENT OF EYE DISEASES, By Casey A. Wood, C. M., M. D., formerly Clinical Assistant, Royal London Ophthalmic Hospital, etc., with numerous wood-cuts. George S. Davis, Publisher, Detroit, Mich., 1891. Paper, 25 cents; cloth, 50 cents.

This number of the "Physician's Leisure Hours Series" has been prepared for the purpose of aiding the physician to detect and treat, by means always at hand, those diseases

of the eye which experience has shown are most frequently overlooked in the course of general practice; and is more or less in the nature of a supplementary work to several others already published in the same series: Conjunctival Diseases by Prof. Wittendorf, and the Detection of the Necessity for Wearing Glasses, by Prof. St. John Roosa. Several subjects have therefore been omitted which otherwise would have been touched. Dr. Wood has given us a work easily within the range of the general practitioner and is generally of an excellent character.

PERISCOPE.

THERAPEUTICS.

THE USE OF JABORANDI FOR URTICARIA.

I have noticed in some of my medical journals of recent date various remedies recommended for the cure of urticaria. I have not, for the past ten years, used any other remedy than jaborandi for this affection. I give one-half teaspoonful of the fluid extract every half hour until four doses are taken, or until free perspiration or salivation is induced. I usually direct it to be given in the evening, and instruct the patient to avoid exposure to cold while taking it and for thirty-six hours afterward. If necessary, repeat in same way in twenty-four hours. I have in no case had to repeat doses more than once to effect a cure I have also found jaborandi given in the same way a most excellent remedy in gonorrhœal rheumatism, when given in the beginning.—Dr. C. Heaton, in the *Cinn. Lancet-Clinic.*

IPECACUANHA IN ANTHRAX.

Dr. Davies-Colley (*La Sémaine médicale*, No. 51, 1891) has employed ipecacuanha externally and internally in the treatment of anthrax with success. He excises the ulcer, dusts the wound with powder of ipecacuanha root, and administers this remedy internally in doses of twenty-five centigrammes (four grains), repeated every four hours. In five consecutive cases of anthrax he obtained good results by this method, while out of eight cases treated otherwise he had two deaths. Dr. Muskett, a South African physician, who first introduced this method of treatment, treated fifty cases in fifteen years without a single fatal termination. Ipecacuanha added to cultures of anthrax kills the bacteria but does not influence the spores.

FURTHER RESULTS FROM KOCH'S REMEDY IN MINUTE DOSES.

At the 64th Congress of German Naturalists and Physicians Prof. Aufrecht, of Magdeburg, reported 112 cases of tuberculosis with most gratifying results, under, however, much smaller doses than given in Germany last winter. He excluded far-advanced cases from the treatment, and has now 48 cases which are considered cured, 37 cases very much improved, and 22 cases improved, only five cases out of the whole number having derived no apparent benefit.

The treatment was long-continued, beginning with so small a dose as 0.0001 gramme and not exceeding 0.005. The discussion by others who had had experience was favorable to small doses, and a number of successful reports were added.—*Deutsche med. Wochenschrift*, Oct. 8.

PEROXIDE OF HYDROGEN IN TYPHOID FEVER.

Dr. F. H. Wiggin writes, in the *Medical Record*, that having had good results in using preoxide of hydrogen locally in diphtheria and tonsillitis, and in infected wounds, it occurred to him when a case of typhoid fever came under his care, during his summer practice, that this remedy might be beneficial, it being the most powerful non-poisonous germicide we possess. On August 24 he was called to see Abby M—, who gave a history of having been ill for a week with fever and diarrhœa. On examination he found a characteristic case of typhoid fever, with temperature 104½° F.; pulse, 130; sore spots, abdominal pain, tympanites, diarrhœa, and mild delirium. I prescribed one ounce of fifteen volume peroxide of hydrogen to eight ounces of water, to be taken every three hours, by the mouth. On the following day I found the patient more comfortable; temperature, 103° F.; pulse, 112; had had only two movements during the twenty-four hours; less delirium and less pain in head. On the 25th had had one movement; temperature, 102° F.; pulse, 104; less tenderness in abdomen, and pain in head diminishing. On the 27th, temperature, 100½° F.; pulse, 98; no movement, tympanites disappeared, and head, though still weak, clearer. On the 29th, temperature, 99½° F.; no movement. On the 30th, temperature normal; pulse, 84; formed movement. The case now went on uninterruptedly to recover, with nothing further of interest to report. On the 9th of September I discontinued my visits, the patient being discharged cured, though weak.

ILLUMINATION *VERSUS* EXPLORATORY PUNCTURE OF THE MAXILLARY AND FRONTAL SINUSES.

Ziem, of Dantzig, (*Berl. klin. Woch.*, June 15th, 1891) repeats his previously expressed view that the diagnosis of suppuration of the maxillary sinus cannot be made with any certainty by the method of illumination through the mouth. In this view he finds himself in opposition to Bresgen and Vohsen; while, on the other hand, he is supported by Lichtwitz, of Bordeaux, and Srebrny, of Warsaw. Ziem adduces, in the first place, those cases of slight suppuration, where neither the amount of pus nor the thickening of the mucous membrane is sufficient to interfere with the transmission of light. In the second place, the size and thickness of the walls of the antrum are not always the same on the two sides in the same individual; and, moreover, there may be an unusual development in the size of the nasal fossa, with imperfectly developed maxillary sinuses. Both Lichtwitz and Srebrny have demonstrated by actual experiment that illumination could not be relied upon to prove the existence of pus in the antrum. As to the method of making an exploratory puncture, Ziem still maintains that it is best to make an opening through the alveolar ridge, and to send a stream of water thence through the nose. With regard to the frontal sinus, he holds that illumination by itself is not capable of furnishing a means of diagnosis, since here, also, there is much difference in the size of sinuses and the thickness of the walls. He considers, however, that a combination of this with other methods may be useful. At all events, in the next case which occurs in his practice with symptoms of suppuration in the frontal sinus, he would employ illumination; and he would follow this by use of the air douche. He would then use illumination again, and if the transparency of the sinus were now increased that would be an indication of disease of the sinus. On the other hand, if no result followed, the case would still be doubtful, and the question of puncturing the sinus from the outside would present itself. This exploratory puncture is rendered much safer by employing illumination, as Vohsen has shown, for the exact limits of the sinus are thereby defined. Having made a puncture with a small trephine, and injected a stream of water, the presence of pus is at once demonstrated, and the after-treatment can be carried out through this opening, which can be enlarged, if necessary, much more effectually than by endeavoring to blow air or powders through the frontal canal, or by cauterizing the mucous membrane of the nose in the vicinity of the orifice of the frontal sinus.—*Brit. Med. Journal.*

MOVABLE VISCERA.

Dr. Mann (*Deutsch. med. Wochenschr.*, August 27, 1881) records the case of a man, aged 43, who suffered from a severe attack of scurvy. A year later his liver, and ten months afterwards the left kidney were found to be movable. The following year the spleen, too, became floating. These facts were diagnosed clinically, and verified at the necropsy, death having resulted from pulmonary œdema and heart disease. After reviewing the causes to which undue mobility of the abdominal organs has been attributed by various writers, Dr. Mann concludes that the favoring conditions are three: (*a*) increased weight of the organ; (*b*) relaxation of the abdominal wall; (*c*) increase in the capacity of the abdomen.—*Brit. Med. Jour.*

ETHERIZATION IN LARYNGEAL CROUP.

Dr. Betz reports the case of a child, aged eighteen months, that presented the typical symptoms of laryngeal croup. The case appeared so hopeless that tracheotomy was, although proposed, rejected. Dr. Betz then proposed "etherization." Three drops of a mixture of either sulph. 3 parts, acetic ether 1 part, menthol 0.1 part, were ordered to be inhaled every quarter of an hour, just as chloroform is inhaled. It was hoped that the cold from the evaporating mixture would contract the surface blood-vessels of the larynx, and thus reduce the œdema present. The child was seen again in two hours, and the condition had somewhat improved. The etherization to be continued, 3 to 4 drops every half-hour. After six hours the condition was unmistakably better, so much so, in fact, that the etherization could be dispensed with. A piece of intestine filled with ice was placed around the child's neck. After this progress was so rapid that in twenty-four hours the child was out of danger.—*Memorabilien.*

MEDICINE.

PRIMARY TUMORS OF THE HEART.

Dr. Jurgens (*Berlin. klin. Wochenschr.*, October 13, 1891) publishes four cases of primary tumor of the heart—a rare affection, in regard to which knowledge is still limited. Case 1 is that of an infant aged 10 months in whose right auricle was found a growth about the size of a cherry. It took origin between the superior vena cava and the insertion of the anterior flap of the tricuspid valve, and on microscopical examination proved to be a simple fibroma. The endocardium of both ventricles here and there showed some fibrous thickening. No symptoms of heart disease were detected during life. Case 2 is that of a man, aged 50, who, although free from heart symptoms during life, was found *post mortem* to have a polypoid fibro-myxoma of his left auricle. The tumor, as large as a walnut, was attached to the middle of the anterior wall, and hung down an inch and a half into the mitral orifice. Microscopical examination showed the structure to be that of a highly vascular pigmented fibro-myxoma, the pedicle containing some striated muscular fibres. Case 3 is that of a man, aged 36, who, having died suddenly, was found at the necropsy to have suffered from a fibro-sarcoma of the right auricle and tricuspid valve, which caused considerable stenosis of the tricuspid orifice. No other pathological condition was discovered. Case 4 is that of a woman, aged 19, who also died suddenly, and whose heart was found *post mortem* to contain numerous small tumors buried in the wall of the right ventricle. These on microscopical examination proved to be gummata infiltrating almost the whole of the right side of the heart. The endocardium, the septum, and especially the region of the tricuspid valves, were also extensively infiltrated, the tricuspid orifice forming a rigid opening, admitting only two fingers. The walls of the arteries and of some of the veins, of the right ventricle showed well-marked sclerosis, while many arteries lying in the connective tissue new growths were completely occluded.—*British Medical Journal.*

"CEPHALIC TETANUS."

In the *Berliner Klinische Wochenschrift* for Sept. 7th, 1891, is an important paper by Dr. Brunner, of Zurich, on the Pathogenesis Cephalic Tetanus, a subject which is at present occupying some considerable amount of attention. Under the term "cephalic tetanus" this observer includes all those cases of spasms due to wounds in which the site of invasion of the tetanus bacilli lies in the region of the twelve cranial nerves. Owing to the localization of the site of infection and the initial distribution of the tetanic poison, a group of symptoms develop which distinctly separate this condition from tetanus as ordinarially met with. Moreover, the early manifestations of the disease are further modified by the exact position of the injury to the head and by the virulence of the poison, as has been proved by experiments on animals. For these investigations the products of the bacilli were separated from broth cultures by Kitasato's method. Subcutaneous injections of very small quantities of the poison, separated as above, produced precisely the same result as inoculations of pure cultures of the tetanus bacillus—namely, contraction of the facial muscles on the side on which the injection was made as an initial symptom. Dr. Brunner divides cases of cephalic tetanus into two classes: (1) Cases without paralytic symptoms; (2) cases with symptoms of paralysis. He does not think that the first class should be considered as cases of ordinary tetanus, for in the latter local spasms are extremely rarely met with, whilst they form the characteristic symptom of cephalic tetanus, and, further, these spasms are often confined to the regions of the cranial nerves, and do not spread and become general. In regard to the second class of cases, in which paralytic symptoms appear, he subdivides them into two groups—one in which the muscles supplied by the facial nerve only are implicated, and a second in which the other cranial nerves are affected. Dr. Brunner draws attention to the fact that a contraction of the muscles on the injured side first appears, and that this gradually gives way to a paralysis. Whether the paralysis is directly caused by the tetanic poison is doubtful. It would seem from experiments that the poison produces its effect locally, and then is carried by the blood current to the brain, and affects the nervous centres. When injected in small quantities locally, it produces spasms of the neighboring muscles, but in larger doses paralytic effects ensue in the same region. Dr. Brieger considers that this is a direct result of the tetanotoxin, but Dr. Brunner does not think that this has been proved. Paralysis and spasms occur when trigeminus has been previously divided, so that any action along the sensory tract is excluded. By injecting the poison into the cerebral hemispheres of rabbits, facial spasms are produced on both sides. If an animal be inoculated with the tetanic poison, and the motor

nerve endings be paralyzed with curare, the facial spasms disappear completely. This demonstrates that the tetanotoxin can act directly upon the motor nerve endings. Dr. Brunner thinks that it is possible that the fibrillæ of the striped muscles are likewise damaged by the poison. The muscles concerned in the act of swallowing are sometimes affected in cephalic tetanus, but not so often as when the wound is situated in some part of the body other than the head.—*Lancet.*

ULCERATION OF THE MOUTH AS A SYMPTOM OF LEAD POISONING.

Dr. Osmund Stedman, has recorded a few notes on this subject because it does not seem to be mentioned in the ordinary text-books as one of the symptoms of lead poisoning. His attention was first directed to ulceration of the mouth as a symptom in this disease by a friend who had two cases in one family, both children, who each had a crop of small ulcers in the mouth, and on having the drinking water analyzed it was found to contain a considerable trace of lead. In April of this year he was called to see a child about two and a half years of age, which was feverish, temperature 100.4°, and had six or eight small ulcers in his mouth which are best described as "phlyctenular." They were situated on the inner sides of the cheeks, some opposite to where there were teeth, and some further back, so that they did not appear to bear any relation to the teeth. The ulcers consisted of red excoriated spots varying in size from that of a pin's head to that of a hemp-seed, each surrounded by a small halo of whitish swollen mucous membrane. The child was constipated, and except the fever had no other symptom to note. The following day the child vomited several times, and had frequent attacks of griping pain in the abdomen (colic), during which he screamed and drew up his legs. These symptoms, of course, clearly pointed to lead as the cause of the trouble, and on analyzing the drinking water it was found to contain a considerable trace of lead, the source of the contamination being rain water stored in a lead-lined tank. There was no blue line present at any time, and on removing the cause of the trouble the patient rapidly got better, the treatment being directed to relieve the constipation by enemata, and the colic by small doses of opium. It would seem, therefore, that in cases of ulceration of the mouth in children one should look carefully for lead poisoning as a possible cause.

THE PRODUCTION OF IMMUNITY AGAINST AND THE CURE OF PNEUMONIA.

In 1890 was published the important discovery by Behring and Kitasato that blood serum taken from animals that had been rendered immune to tetanus and diphtheria was capable of curing other animals suffering from those diseases. Drs. G. and F. Klemperer (*Berliner klinische Wochenshcrift*, August 24th and 31st, 1891) publish a research carried out in regard to pneumonia, with the object of discovering how immunity against the pneumococcus could be best produced, whether recovery from the disease rendered an animal immune, and whether it was possible to cure pneumonia by the blood serum of animals that had recovered from the disease. Their experiments, which were confined to rabbits, revealed that every nutrient medium in which the pneumococcus has been cultivated will, if inoculated, render an animal immune against pneumonic septicæmia, even after the cocci have been removed by filtration. The power of producing immunity is more speedily acquired, and is increased if the infected nutrient medium (before or after removal of the cocci) is exposed to a temperature of between 41° to 42° C. for two or three days, or of 60° for an hour or two. In every case, however, it was found necessary that some interval (varying from three to fourteen days) should elapse between the inoculation and the production of immunity. Hence it was too late to cure a diseased animal or even to prevent the onset of an attack if the injection was given simultaneously with the outbreak of the disease. On the other hand, serum taken from animals enjoying immunity was found able, especially when introduced directly into the circulation, to cure pneumonic septicæmia. The serum was injected twenty-four hours after infection, while the animals had a febrile temperature of between 105° and 106.5° F. Eight cubic centimetres were injected with the result that the temperature gradually sank during the next twenty-four hours. In twelve successive cases a successful result was obtained. This research therefore confirms, in regard to pneumonia in rabbits, what Behring and Kitasato did for tetanus and diphtheria. Drs. Klemperer next studied the question how the blood serum of an immune animal cures an attack of pneumonic septicæmia, and discovered that when the pneumococcus is introduced into the body of an animal it generates a poisonous substance which can be isolated, and to which the name of "pneumotoxin" has been given. This

pneumotoxin sets up a febrile condition which lasts several days, after which another substance is found to have been produced called "antipneumotoxin," which is able to neutralize the pneumotoxin. The serum taken from an immune animal contains this antipneumotoxin, and it is by means of this substance that it cures an attack of pneumonic septicæmia in other animals. The relation of pneumonia as seen in rabbits with that met with in man was next investigated, and the conclusion arrived at that the disease in both cases is produced by the pneumococcus, but that the human body is much less susceptible to the latter than the rabbit is. Thus it was found that serum taken from pneumonic patients after the crisis could cure pneumonia in rabbits; moreover, pneumotoxin and antipneumotoxin were found to be present in human serum as in that taken from rabbits. The crisis of pneumonia, according to Drs. Klemperer, takes place as soon as antipneumotoxin is produced in sufficient quantity to ueutralize the pneumotoxin. Why immunity against further attacks lasts so short a time in man is still uncertain, but possibly less antipneumotoxin is formed in man than in rabbits in proportion to the pneumotoxin. Some attempts have already been made to cure patients suffering from pneumonia with the help of antipneumotoxin, but further observations are necessary before results can be published.—*Brit. Medical Journal.*

EXPERIMENTAL TYPHOID FEVER.

Gilbert and Girode (*Le Mercredi Medical*, May 6, 1891) call attention to the fact that animals inoculated with Eberth's bacilli have behaved differently in the hands of various experimenters. Gaffky observed no pathogenic action. Sivotinni and others have observed an acute septicæmia without multiplication of the bacilli, while Frænkel and others have observed a disease closely resembling human typhoid fever. The writers detail experiments on two guinea-pigs inoculated with Eberth's bacilli. Both animals had diarrhœa and loss of flesh, and died, one on the fourteenth the other on the thirty-second day. The *post-mortem* examination showed inflammation of Peyers' patches and ulceration of the mucous membrane of the cæcum, with enlargement of the lymphatic glands.

Bacilli were found in various situations. Tubes inoculated with splenic pulp and contents of the intestine showed growths of Eberth's bacilli—*Univ. Med. Mag.*

SPECIFIC GRAVITY OF THE BLOOD IN DISEASE.

Questioning the reliability and practicability of the methods of determining the specific gravity of the blood that have hitherto been employed, Schmaltz, of Dresden, has adopted the pyknometric method as the most exact. For this purpose he employs capillary tubes of special form, with a capacity of about one-tenth of a cubic centimeter. In one case the specific gravity of the blood obtained by venesection, taken with a large instrument, was 1040.98, and with the capilliary instrument 1041.48. As a result of 55 examinations of his own blood, and of examination of the blood of 20 persons of both sexes, Schmaltz has found that the density of the blood is very little, if at all, influenced by taking food or fluids (including a quart of physiological salt solution), by intense bodily exertion, and the development of hyperæmia of the skin at the point from which the blood is to be drawn. The specific gravity of his own blood was somewhat higher in the morning than later in the day, the greatest difference being included between 1056 and 1062.1, and being apparently independent of food and drink. The average specific gravity of the blood of eight men was 1059.1, and of 12 women 1056.2, showing a lower range for women than for men. The specific gravity remains fairly constant in healthy persons.

Schmaltz has tested the specific gravity of the blood of 95 patients, mostly women. 29 were chlorotic women with anæmia, more or less acute, without known cause. In nine of these the specific gravity of the blood fell below 1040, and in two below 1035. In the remaining 18 cases the specific gravity ranged from 1035 to 1049.

In 21 cases existing anæmia was known to have been a result of hæmorrhages and severe blood diseases. The figures obtained were higher than in the case of the chlorotics; two patients died; one had leukæmia and endocarditis (sp. gr. 1034), and one septicæmia and endo-carditis (sp. gr. 1030). In one case of hæmatemesis, the specific gravity was 1031; in one of carcinema of the stomach and liver, 1039, and in one of incipient phthisis it was 1036. On the other hand, in a case of severe metrorrhagia, in which the patient, who a short time before the blood was examined almost died in collapse from hæmorrhage, and was extremely anæmic, the specific gravity of the blood was 1042. In the other cases—heart disease, Bright's disease, typhoid fever, etc.,—the specific gravity ranged from 1039 to 1049.

In a series of 33 cases, including one very anæmic patient, all of the organs of whom were healthy, cases of dilatation and of ulcer of the stomach, tertiary syphilis, progressive phthisis, valvular lesions of the heart, diabetes, marasmus, articular rheumatism, and two convalescent cases, one of pleurisy with effusion, and one of acute bronchitis, the specific gravity of the blood suffered no material diminution, and in two or three cases was even abnormally high—1063 (progressive phthisis and heart disease). Some of these cases lend support to the view of Oppenheimer, that when the proportion of hæmoglobin and the specific gravity are normal, though the patient be anæmic, there must be an abnormal distribution of the blood. It must be borne in mind that in some cases the specific gravity of the blood rises during inanition. In other cases, conditions of blood-stasis, such as occur in phthisis and in heart disease, raise the specific gravity in the areas of stasis.

In 26 cases Schmaltz compared the specific gravity of the blood with the percentage of hæmoglobin and with the corpuscular richness of the blood. He found that a lowering of the specific gravity goes hand-in-hand with a diminution of hæmoglobin, while the specific gravity is in a large degree independent of the number of red blood-corpuscles.

In four cases of chlorosis cured, the specific gravity rose until it became normal; in other cases it increased, but failed to reach the normal without the disappearance of the other symptoms.

As a result of his studies, Schmaltz formulates the following conclusions: Under normal conditions the specific gravity of the blood in man varies within narrow limits; as a rule it diminishes considerably in anæmic conditions, especially in chlorosis and diseases of the blood proper; the density of the blood is chiefly determined by the quantity of hæmoglobin present, while it is in a large measure independent of the number of red blood-cells; with improvement in the anæmic condition the specific gravity of the blood raises, and with complete recovery attains the normal. It seems, therefore, that the specific gravity of the blood is an accurate index of the condition of the disease; when the circulation is retarded in the extremities—for example, in diseases of the heart and lungs—the specific gravity of the blood is not rarely elevated, and may, in spite of persisting anæmia, be found normal.—*Deutche med. Wochenschrift*, Nov. 16, 1891.

[Schmaltz describes his "capillary pyknometer" and his method of using it in the *Ditches Archiv für klin. Medicine*, Bd. xlvii, 145. A capillary tube containing distilled water is weighed, the water is expelled and the tube again weighed—the difference in weight, of course, is the weight of the water. In the same way the weight of a capilliary tubeful of blood is obtained. The weight of the blood and the water being thus known, simple division gives the specific gravity.]—*News.*

SURGERY.

THE TREATMENT OF INTESTINAL OCCLUSIONS BY THE EMPLOYMENT OF THE CONSTANT OR GALVANIC CURRENT.

This has been the subject of a report to the Académie de Médecine, by M. Semmola, of Naples, given in *Le Progrès Médical* for October 3d, 1891, from which it appears that:

"1. There may be an intestinal occlusion caused solely by a defect of enervation.

"2. The curative effect of the constant current is, in such cases, very remarkable."

A case of obstinate constipation in a lady about fifty years of age, under the care of the writer, presented all the symptoms of intestinal occlusion. Large doses of active cathartics were given without success. Thirty grains of calomel at one dose brought no change. At the suggestion of the late Dr. Joseph C. Hutchison, who was called in consultation, a large dose of metallic mercury was given and massage employed in the hope of removing the obstruction without effect. On the sixteenth day the interrupted or Faradic current was used; the negative, through an olive-shaped electrode, was applied within the rectum; the positive, over the abdomen. On the eighteenth day the obstruction was removed, and a copious evacuation gave almost instant relief. The recovery was perfect.

For further details, see article on "Intestinal Obstruction" in the *International Medical Annual* for 1890, p. 333.

A NEW FORM OF SUTURE.

Opossum tail sutures are coming into vogue in America. The tail of this animal has many long and strong fibres, which, according to H. O. Marcey, of Boston, assumes the purposes of ligatures much better than catgut. From observations which he had made in cases in which he used the kangaroo tendon. he found that the tendon had not been absorbed or encapsuled, but had become part of the living tissue. He had often availed himself of the opportunity to prove this fact in the case of vessels which some time previously he had tied with the tendon.—*Med. Press.*

THE ETIOLOGY, PROPHYLAXIS AND THERAPEUTICS OF HÆMORRHAGES AFTER TONSILLOTOMY.

Although hæmorrhages following excision of the tonsils are of rare occurrence, they are of great interest to surgeons. The majority of patients are adults, in whom the hæmorrhage is due to the fact that the incised blood vessels fail to retract and contract properly in the indurated tonsillar tissues. The bleeding never results from injury of the carotid artery, as was formerly believed, but comes from the enlarged tonsillar branch of the carotid or the ascending pharyngeal, from the pterygo-palatine artery, or from the ascending palatine in cases where the latter vessel is abnormally situated. Usually, however, the hæmorrhage is not arterial, but of parenchymatous character. It can be easily understood that in persons suffering from hæmaphilia, tonsillotomy may give rise to an uncontrollable hæmorrhage.

As regards the prophylaxis, care should be taken in the performance of tonsillotomy not to draw the tonsils too far forward between the faucial pillars, because the surrounding folds of mucous membrane, and the vessels at their point of entrance in the tonsils, are exposed to injury. These accidents are most likely to happen if guillotine-shaped tonsillotomes or scissor-formed instruments are used. Especial care should be taken not to operate in the acute stage of inflammation, or in marked tonsillar hypertrophy, because these conditions favor the occurrence of secondary hæmorrhage. For the same reason the surgeon should content himself with excising only that portion of the tonsil which projects beyond the faucial pillars, the more so since the remaining part usually undergoes spontaneous shrinkage.

If a severe hæmorrhage occurs we should make use at first of styptics, which, in conjunction with compression, are usually sufficient to arrest the bleeding. The application of ice is an excellent hæmostatic. If these means fail, we resort to cauterization with nitrate of silver, or better still, the Pacquelin cautery. In the severe cases litigation of the common carotid artery has been successfully performed. As a final resort, tracheotomy with tamponing of the pharynx may be entertained. Experience has shown that severe hæmorrhages are frequently arrested by the occurrence of vomiting or syncope, and these conditions may be artificially produced for the same purpose.—Dr. O. Von. Holst, in *Oest.-ungar, Centralbl f. d. Medicin. Wissenchaften*, No. 11, 1891.

THE METHODS OF CARRYING OUT ASEPSIS IN VON BERGMANN'S CLINIC.

Schimmelbusch (*Langenbeck's Archiv.* Bd. 42) gives in detail the manner in which the dressings, instruments and brushes used in the clinic of Von Bergmann are rendered aseptic. The use of sublimate and carbolic solutions has largely given way to the employment of moist and dry heat. The efficiency of antiseptic solutions has been overestimated. It has been shown that threads infected with splenic fever contained living germs after fourteen days' immersion in a five per cent. carbolic solution, also that they were not killed by an immersion in a 1 to 1,000 sublimate solution for twenty minutes; they lived even after twenty-four hours' immersion. The antiseptic property of a solution may be destroyed by the active agent being rendered inert by undergoing a chemical change; thus, sulphur (as in fæces) will combine with corrosive sublimate and from an insoluble and inert sulphide of mercury. La Place has also shown how albuminous compounds will combine with it and thus destroy its activity. It is also impossible to subject each individual bacterium to the action of the germicide. Bacteria often occur in masses or in extraneous matter, and it is only those on the surface that are reached and affected by the antiseptic. Oils and fats likewise interfere with their action. These facts, together with the dangerous action of antiseptics on the human organism, contrast markedly with the efficacy and innocuousness of disinfection as accomplished by moist and dry heat. Mechanical cleansing is at the basis of and should precede all attempts at sterilization.

It's bad enough to have a cold,
And yet one might endure it,
If every fool would not proceed
To tell one how to cure it.—*Ex.*

TREPHINING THE VERTEBRAL COLUMN IN GUNSHOT WOUND OF THE SPINAL CANAL.

At a meeting of the Société de Chirurgie on November 18 (*Sem Méd.*, November 25), M. Nicaise presented, on behalf of M. Vincent, of Algiers, a communication on gunshot wounds of the spinal cord, and the treatment of them by trephining the spine. He classifies the lesions in such cases as follows: (1) Simple compression of the cord by effused blood, splinters of bone, or fragments of the projectile; (2) contusion or laceration of the cord caused by the bullet; (3) lodgment of the bullet in the vertebral column, with or without projection into the canal. M. Vincent is an advocate of operative interference in such cases, and he reports eight cases, with five cures and three deaths. He considers the cases in which the lesion belongs to the first of the above-mentioned categories as being the most favorable for operation, and he relates, in illustration, the case of a man, aged 31, who was struck by a bullet in the lumbar region. This was followed two days later by marked signs of compression of the cord. M. Vincent cut down and found a fractured lamina; he trephined, and introducing his finger into the canal found the cord free from compression. The bullet could not be found, and the wound was closed. Symptoms of meningo-myelitis followed the operation, but they quickly passed off, and in three weeks the patient was able to walk. Where the lesions come under one of the other categories mentioned, surgical interference is also indicated, but it is most important first to detemine as far as possible the exact site of the injury. He related the two following cases: 1. A lad, aged 18, was struck by a revolver bullet in the dorsal region; this was followed by symptoms of bruising of the cord. The spinal column was trephined on the third day, and the bullet was extracted. Death occurred eight days later, when it was found that the cord had been completely crushed. 2. A man, aged 37, was shot in the back on the level of the tenth dorsal vertebra; complete paraplegia followed. The bullet, together with a splinter of bone, was removed. After a period of improvement the patient died on the ninety-fourth day. M. Lucas-Championniere said that the difficulty in these cases lay in the localization of the lesions. He had trephined the spine, though not for gun-shot wound. He considered the operation as being still outside the exact rules of surgical art, besides being long and laborious, but he thought it capable of yielding good results, and the aggravation of the paralytic symptoms which sometimes ensued was merely transient. M. Bazy said he had three times operated on the spine, always using the chisel and mallet. In one of his cases the paralysis was so extensive that the patient breathed entirely with his diaphragm; nevertheless, chloroform was given without bad effect. M. Moty said he had made a *post-mortem* examination in the case of a patient from whom M. Delorme had removed a portion of a vertebral arch. The gap was filled up by fibrous tissue.—*Brit. Med. Jour.*

SIXTY-TWO CASES OF ENUCLEATION FOR GOITRE.

Lehotzky in the *Wiener klinische Wochenschrift*, October 8, 1891, gives the histories of a large number of operations by enucleation for enlargements of the thyroid gland from the clinic of Albert. He says the operation has definitely demonstrated its worth for a certain class of cases. Kocher, Wölfler and König are quoted as supporting this view. The operation is based on the fact that one of the forms of hypertrophy of the thyroid gland consists of an enlargement of a few of the follicles of the gland separated from the healthy parts by a more or less thick layer of fibrous tissue. It is not intended for other forms of enlargement or when the whole of the gland is affected. It is undertaken sometimes on account of the discomfort which the increased size occasions and sometimes for cosmetic reasons. The size of the growths varies from that of a hazelnut to that of a man's fist. The parenchymatous capsule of the nodes varied in thickness, one reaching five centimetres. Their boundary, was, in most cases, sharply defined. Sometimes, instead of being able to enucleate with blunt instruments it was necessary to cut and ligate carefully. The most dangerous thing in the operation is hæmorrhage. Capillary and venous hæmorrhages occur if the enucleation is made slowly, while, if made rapidly, very free arterial and venous hæmorrhage may occur. In such cases the wound is tamponed with iodoform gauze, and this is gradually removed as the vessels are ligated, all bleeding being carefully stopped. While in many cases the bleeding was enormous, still it was always controlled by ligature. Dividing the tissues between ligatures lessens the loss of blood, but prolongs the operation, and requires great patience. Parenchymatous hæmorrhage was only noticed in one case, also secondary hæmorrhage once. In one case the hæmor-

rhage after enucleation was so free as to require ligation of the carotid. One death from entrance of air into a torn vein is recorded. Enucleation is also suitable in cystic goitre, and where from the thinness of the cyst-wall or other causes it is impossible to remove all the cyst-wall, it may be sewed to the wound and treated with iodine injections. The same may be done with suppurating cysts. Chloroform narcosis was employed in most cases, although in small-sized growths cocaine anæsthesia was sometimes successfully used. One death occurred from chloroform. The incision should be made from above downward over the most projecting part of the growth. Catgut ligatures and silk sutures were employed and iodoform gauze packing to stop bleeding, the strip being allowed to hang out of the lower angle of the wound. Several cysts or nodes can be enucleated through the same wound. The recurrent nerve lies out of the plane of operation and can be avoided. In many cases the operation is readily done and heals promptly. Enough glandular tissue is left behind to obviate all fear of any cachexia following. When the growth is very large, and composed of several parts, so much only is taken away as will remove the bad symptoms of the case.—*Univ. Med. Mag.*

RELATION OF ALBUMINURIA TO SURGICAL OPERATIONS.

In a paper upon this important theme read before the Southern Surgical and Gynæcological Association (*Virginia Med. Monthly*, Dec., 1891), Dr. Long arrived at the following conclusions:.

1. Ether or chloroform rarely injures healthy kidneys.

2. When renal disturbances occur from the use of an anæsthetic, the kidneys being healthy, they are due rather to prolonged narcosis, exposure of the patient, or perhaps to the combined influence of the operation and the anæsthetic.

3. A mild degree of albuminuria (or nephritis), especially if recent, is not a contra-indication to the use of chloroform.

4. Even in the presence of advanced and extensive renal changes, an anæsthetic may be employed, provided the patient or the family be advised of the additional risk.

5. Of the two anæsthetics usually employed, it is yet a mooted question as to which is the safer, so far as the kidneys are concerned, unless it be in obstetrical operations.

6. While it is by no means the rule, profound functional disturbance, and even organic lesions may be induced by an operation, apart from the influence of the anæsthetic.

7. Such renal changes are due to reflex sympathetic action, or to sepsis, or both.

8. Operations in certain regions—notably, the abdominal, genito-urinary, anal, or rectal, are especially liable to produce renal complications.

9. A healthy condition of the kidney *minimizes*, but does not obviate, the danger referred to.

10. Albuminuria is always an indication of renal lesions, and should be regarded with distrust, but is not a positive contra-indication to an operation.

11. When albuminuria is associated with other evidences of advanced renal changes, no operation should be undertaken without candidly stating to the patient or friends the dangers incident to the condition of the kidneys.

12. Paradoxical as it may seem, an operation will sometimes relieve an albuminuria due to acute affections.

13. No surgeon is justified in undertaking an operation without first knowing the state of the patient's kidneys.

THE LOCAL APPLICATION OF ETHER IN STRANGULATED HERNIA.

Finkelstein (*Berliner klinische Wochenschrift*, May, 1891) again draws attention to his method of treating this affection. In 1882, in No. 30 of this journal, he gave the details of sixty-three cases of hernia in which taxis failed. Local etherization was followed by reposition in fifty-four and failed in four; two of these were operated on, and two refused interference and died. In the present paper twenty-three additional successful cases are given, some of which occurred in the practice of other surgeons. In one case improvement occurred, and a movement of the bowels took place, but an operation was afterward performed, and some omentum replaced. Another case died suddenly, and the intestine was found of a dark, brownish-blue color, but strong and not at all easily broken. His method consists in placing the patient on his back, with the hips somewhat elevated and the knees flexed. The scrotum is to be supported by a small pillow. Every ten or fifteen minutes a drachm of sulphuric ether is poured on the tumor, and in from three-quarters to three hours usually, or six hours, as occurred in one case, the tumor will have diminished in size, and will either recede of itself or be readily returned.

The surrounding parts may be partly protected by smearing with oil, or a flat layer of cotton may be placed on the tumor and the ether poured on this.—*Univ. Med. Mag.*

OBSTETRICS.

CÆSAREAN SECTION FOR ECLAMPSIA OF PREGNANCY.

Dr. H. Von Swiecicki (*Der Fraaenorzt*, September, 1891) performed Cæsarean section on May 25th, 1891, in a small house in the city of Posen. The patient, in the last stage of pregnancy, was in a profound coma, interrupted occasionally by tonic and clonic convulsions. The legs were œdematous. There was no physical sign that labor had commenced. On that account Dr. Swięcicki determined to operate at once. The abdomen was thoroughly washed. A free incision was made in the median line, beginning above the umbilicus and ending about two inches and a half above the symphysis. When the peritoneum was opened the operator enlarged the incision till the uterus could be extruded without difficulty. The assistant pressed the parietes together behind the uterus, the intestines being protected by folds of mull. An elastic ligature was passed round the uterus close to the cervix. The uterus was laid open in the middle line, which was the site of the placenta. The child, placenta, and membranes were carefully removed. The child was asphyxiated and could not be revived. The uterine wound was closed with twenty-two asepticised silk ligatures. The deep sutures were passed designedly through the decidua. Dr. Swiecicki had successfully performed Cæsarean section for a case where labor was obstructed by a bony tumor of the pelvis, and found that it was best to include the decidua; nor did a very careful apposition of the serous surfaces of the wound appear essential to success. During the application of the sutures the assistant rubbed the surface of the uterus up and down. The elastic ligature was now removed; it had not been tied very tightly lest it should paralyze the vasomotor nerves and cause atony of the uterus. There was slight bleeding from two suture tracks, which soon ceased. The uterus contracted well and was returned into the abdomen. The abdominal wound was closed. The operation lasted scarcely thirty minutes. The coma continued after the operation and symptoms of œdema of the lungs quickly followed. The patient died. This is the tenth case where Cæsarean section has been undertaken for eclampsia, as advocated by Halbertsma. No fewer than six were performed in Holland; out of these five mothers recovered and five children were saved. The convulsions ceased in four of these cases; in the fifth three slight fits occurred after the operation. Case 7 was Herff"s; mother and child were saved, though the former had jaundice and maniacal delirium before she recovered. Rosthorn and Müller (cases 8 and 9) were as unfortunate as Dr. von Swiecicki, who on that account cannot feel enthusiastic about the grave proceeding in question, since the danger is greater than Halbertsma might induce one to believe. Yet Dr. von Swiecicki considers that in eclampsia near term when the child is alive and cannot be delivered by the natural channel, either owing to entire absence of any natural effort to deliver it or to pelvic obstruction, Cæsarean section is justifiable. The obstetrician must deliberate on the grave responsibility, but the operation must be done as early as possible.—*Brit. Med. Jour.*

PROTECTION OF THE PERINEUM.

Wm. S. Gardner (*Journal of Gynecology*, September, 1891) writes that the value of a complete perineum is so great that the gynæcologist spends much time inventing new methods for its repair. What he has to offer on this subject is only the method of applying the principle that time is the great perineal protector, bearing in mind that almost any perineum will distend sufficiently to allow the safe passage of the head, if only the head can be prevented from advancing with too great rapidity just during the last portion of the second stage of labor. The two great forces driving the child toward the outer world are the contractions of the uterus and the contractions of the abdominal muscles. There comes a time in the labor when the perineum has become so weakened by distention that it can no longer bear the great pressure of these combined forces, a time when a few minutes' delay means the prevention of a rupture. Uterine action is beyond our control; the contraction of the abdominal muscles can be controlled either by complete anæsthesia or by the will of the patient. She is instructed in the interval between the pains that when she feels a pain coming on she is at once to open her mouth and breath through it as rapidly as possible. In addition the head is held back by pressing against the perineum in the direction of the pubes. The perineum should be as carefully guarded during the passage of the shoulders as during the delivery of the head.—*Univ. Med. Mag.*

TO DETERMINE PREGNANCY.

Dr. W. R. Lowman (*Med. Summary*) gives the following method: Examine under the tongue for two teats, about the size of No. 4 shot, each attached to a slender cord in which a nerve runs, connecting with the genital centre. They are pale in the non-pregnant, but in the enciente they are purplish red.

MATERNAL IMPRESSIONS.

Dr. Archibald Mackay writes in the *Lancet:*

I have read with much interest the remarks on Dr. Lee's cases of maternal impressions in the *Lancet* of the 21st ult. As I have met in my practice with several cases in which marks on the child have been ascribed by the mother to fright or other causes experienced during pregnancy, the following notes may be of interest:

The first case which came under my observation was that of a young girl with an oblong patch of soft dark hair on the left cheek, extending from the ear downwards to the neck. The mother stated that while pregnant she was working in the field at haymaking, when her husband threw a young hare, which he had found in the hay, at her, striking her on the cheek and neck in the exact place where the patch of hair was found on the child at birth. The color and character of the hair on the patch closely resembled the fur of a very young hare.

The second case was that of a lady who, on entering her kitchen when pregnant, found the servant with a paraffin lamp on fire. She happened to place her hand on the back of her neck at the moment, and turned away immediately, lest the shock might produce a miscarriage. The child (a male) was born at full time, and when examined had a red discoloration of the skin on the back of the neck, extending upwards toward the occiput, in pointed tips, not unlike a flame in shape and appearance.

The third was also a male child. The mother, immediately after the child was dressed, inquired if he had any marks. I asked her to tell me what kind of a mark she expected, and where I was to look for it. She replied, "Look on the top of the head for a mouse mark." When the head was examined a brown oval patch was found on the spot indicated. The mother in this case did not see the child, and the mark was not observed until she had made inquiry about it. It seems that when pregnant, on opening a press, a mouse jumped out at her feet, causing a sudden shock, and she involuntarily placed her hand on the top of her head in the exact spot where the patch was found on the child.

The fourth case, a male child, when born had a raised bluish mark on the mucous membrane of the lower lip. The mother said she could only account for it by her having great sympathy with a friend who was in bad health at the time she was pregnant, and who had a venous nævus on the lower lip in the same place as on the child's lip.

The fifth case was that of a female child, with a circular pinkish mark on the left arm above the elbow. The mother ascribed the cause to ungratified desire. When walking past a gentleman's grounds she saw a flowering rhododendron, which she stood to admire, and happened to catch her left arm above the elbow with the right hand, being about five months pregnant at the time, and to this cause she attributed the mark on the child.

In these cases the first three were attributed to sudden fright, the part touched at the moment the shock was received being the part affected in the child; the fourth to sympathy, and the fifth to a wish ungratified. The exact period of gestation at which the impressions were received I have not been able to find out, but, as far as could be ascertained, it was between the fourth and sixth months. The mothers in all these cases were strong and healthy, and the infants well-developed and born at full time.

HYDRASTIS CANADENSIS IN OBSTETRICS.

Bossi, of Genoa (*Nouvelles Archives d'Obstét. et de Gynéc.*, Aug., 1891), has carefully analyzed sixty-four cases where he has administered this drug. He finds that the fluid extract, administered at any stage of pregnancy, in doses of 100 to 200 minims daily for several days, has no evil effect either on the mother or child. It is equally innocuous during delivery. It has a constant, curative, and prophylactic hæmostatic action on the uterus during pregnancy, labor, and the puerperium, without any ecbolic effects or modification of the uterine contractions. It is infinitely preferable to ergot, and much less dangerous when distributed to midwives for use in hospitals and in private. Bossi gives 100 to 150 minims daily, in three doses, during hæmorrhage in pregnancy and labor. He also administers it as an immediately curative agent in flooding during labor, in three or four doses amounting to 200 minims; and in placenta prævia he gives the drug at the beginning of labor, and during dilatation of the os. Bossi also uses the liquid extract as a prophylactic agent against *post-partum* hæmorrhage, and against flooding in hy-

dramnios, uterine inertia, large fœtus and placenta, anæmia in the patient, and predisposition to flooding from any known or unknown cause, as proved by the experience of previous labors.—*Brit. Med. Jour.*

GYNÆCOLOGY.

ELECTRICITY IN METRORRHAGIA.

Boer, (*Norsk Magazine for Laegevidenskaden, No. 5, 1891*), in two desperate cases of metrorrhagia, where all other means failed, succeeded by the induction current in stopping the hæmorrhage in the course of ten minutes. it returned after two days, it was again ployed, four times in all, after which the emorrhage ceased entirely.

RACEMOSE SARCOMA OF THE CERVIX.

Pfannenstiel (*Centralbl. f. Gynäk.*, October 17th, 1891) describes a case of the very malignant racemose tumor of the uterus, first described by Pernice as myosarcoma strio-cellulare u ri, and sometimes termed rhabdo-myosarcoma uteri. In Pfannenstiel's case the patient was 53, and been pregnant four times. Five years after the menopause she was seized with sacral pains and discharge. A grape-like mass reached the vulva, occupying the vagina and springing from the anterior part of the cervical canal. This mass was cut away. In one year and three-quarters the patient returned, and the racemose mass, which had grown again in spite of cauterization of the cervical canal, was removed. The wound left on its removal was scraped with the sharp spoon and touched with Paquelin's cautery. Six months later the tumor had recurred. The uterus was extirpated and the patient recovered. Half a year later another recurrence took place in the left half of the vaginal scar. The recurrent growth was cut out and the wound cauterized. When the report was read, recurrence had once more occurred. Pfannenstiel has collected eleven cases of racemose sarcoma of the cervix. It is most frequent in multiparæ, and prevails either at puberty or the menopause. It is essentially malignant, the average duration of life being under two years. After excision, it rapidly recurs in the cicatrix, but is relatively slow in infecting the neighboring parts. The disease has always hitherto recurred after operation. Pfannenstiel believes, however, that this evil record is due to the fact that it has never hitherto been diagnosed until it has formed a large mass. The results of operation will doubtless be less serious when interference can be made earlier. In any case where racemose sarcoma is diagnosed the uterus should be extirpated or, if the disease has advanced too far, the mass must be cut away and the wound freely scraped. The pathological peculiarities of the tumor are perhaps better known than its clinical course. It often contains embryonic striped muscle cells. Owing to its racemose character it is easily distinguished, but it might be confounded with hydatid chorion or with cauliflower ephithelioma of the cervix.—*Brit. Med. Jour.*

TREATMENT OF SEVERE PROLAPSUS UTERI.

Dr. Richelot (*Union Med.*, October 3d, 1891), advocates extreme measures in cases of prolapsus which recur after colpo-perineorrhaphy or Alexander's operation. Vaginal hysterectomy, Dr. Richelot maintains, is a very easy and mild operation. He has twice had recourse to it with success. He adds, however, that though this extreme proceeding is very useful in relieving the patient from the inconvenience of a heavy uterus, it does not prevent the vaginal walls from prolapsing again. Hence hysterectomy must be considered rather as a preliminary operation. Ultimately a colporrhaphy will be needed, or an operation for obliterating the vagina after Le Fort's method. "When that has been done," says Dr. Richelot, "your patient will be thoroughly cured, without possibility of recurrence."—*British Medical Journal.*

ON VAGINAL HYSTERECTOMY FOR CARCINOMA.

So much has this operation been decried on the ground of failure to radically cure, that the latest batch of statistics from Leopold's Klinik, in Dresden, will be received with peculiar interest. A carefully conducted inquiry into the present condition of all the patients thus operated upon in that institution from 1883 up to May, 1889, has been made in the present year by Leisse (*Archiv für Gynäkologie*, No. 40, 1891, Heft 2). The majority of these patients surviving, were examined with a view to determine local conditions; a few only were unavailable, and replied by letter.

From 1883 to May, 1889, in all, eighty total extirpations per vaginam were conducted. In all these cases at least two years have elapsed since operation; and out of the eighty, forty-five are still living, and in good health. The majority of the deaths have occurred during the later part of the time embraced; this being accounted for by the statement that a greater skill in operating

has allowed the inclusion of cases previously outside the pale of probable successful operation.

Of the thirty-five deaths, eight were due to other diseases *e. g.*, phthisis, etc.; so that the mortality, after a probation of two years, is lowered to 37.5 per cent, due to recurrence. Sixty-two and a-half per cent, therefore, of the cases were successfully operated upon; and this after a two years' test.

The following table of results is given in the *Archiv für Gynäkologie.* S. 265.

2 cases were operated on	7	yrs.	ago;	2	still survive	=	100	p. c.
9 cases had been	6	"	;	6	"	=	66	"
30 " "	5	"	;	18	"	=	60	"
42 " "	4	"	;	25	"	=	59	"
58 " "	3	"	;	34	"	=	58	"
80 " "	2	"	;	45	"	=	56	"

HEROIC GYNÆCOLOGY.

Not long ago it was suggested in many quarters that abdominal section for diseases of the female organs was performed too often. It requires experience and judgment to recognise how far tubes and ovaries are sufficiently diseased to require removal when they have already been exposed by an exploratory incision. Much valuable knowledge has already been gained on this subject, and Polk, of New York, Martin, of Berlin, McCann and Skutsch have successfully performed a conservative and plastic operation on the Fallopian tube. Thus the primitive age of abdominal operations is passing away. Unfortunately, it would appear from a perusal of the European medical press that an era of excess is passing over vaginal surgery. The entire specialist French press was taken up last spring with discussions on a proceeding to which we have hitherto turned little attention. We refer to the total extirpation of the uterus and appendages for chronic inflammatory diseases of the peritonitic type. One operator at least both practiced it extensively and advocated it in the face of violent opposition from the most respected authorities. Another and better-known specialist, in a lecture delivered to pupils, advocates very extreme measures for prolapsus uteri. This affection is, no doubt, a sad inconvenience to stout elderly ladies and workwomen, but it does not endanger life. More than one German gynæcologist, however, has removed the uterus from the vaginal side as a remedy for prolapses. This is surely an extreme measure, but the French teacher referred to above does not consider the removal of a big prolapsed uterus as "extreme." Indeed, he speaks of that operation as *très facile et très bénigne*—minor surgery, as it were. For delivering a woman from the trouble of big uterus by cutting into peritoneum and handling omentum and intestine through a narrow canal hard to keep free from sepsis is, it would appear, a mere preliminary. The patient's comfort is not yet assured, for prolapse of the vagina is very likely to follow. The vagina must, therefore, be sewn up, or narrowed by a plastic operation—then the cure will be complete. The above teaching is based upon some of the principles which the true scientific and practical man of physic studiously deprecates; still more studiously does he avoid teaching them to his pupils.—*British Medical Journal.*

PÆDIATRICS.

PARAFFINE IN DIPHTHERIA.

Mr. A. M. Sydney-Turner, Surgeon to the Gloucester County Infirmary, informs the *Lancet,* in reply to inquiries, that he has treated thirty cases of diphtheria (children and adults) with paraffine, and has had the satisfaction of seeing every one recover. His plan is to ask for the ordinary paraffine used in lamps, and having scraped off the diphtheritic patch, to apply the paraffine every hour to the throat (internally) with a large camel's hair brush. As a rule, the throat gets well in from twenty-four to forty-eight hours, and with improvement in the throat the paraffine is applied less frequently, but he continues to use it for two or three days after the complete disappearance of the patches. He speaks definitely as to the therapeutic effects, but is unable to state what the chemical action of paraffine on the diphtheritic membrane is; probably the hydrocarbons in the liquid exert some powerful influence on the membrane.—*Scientific American.*

COCAINE IN PERTUSSIS.

Dr. A. Bianchi administers the hydrochlorate internally in doses of thirty to eighty centigrammes per day, giving a dose every two or three hours; and in bad cases even as much as one gramme. No evil effects were observed; on the contrary, from the very first there was an improvement. The attacks became less frequent, from thirty or forty in the twenty-four hours to ten or twelve, or even less. The vomiting ceased, and consequently nutrition improved; along with the appetite the gastro-enteric functions were performed with regularity. The cure in some cases was complete in a week, in others from fifteen to twenty days. The cough did not cease, but the spasmodic attacks became less

and less frequent and severe. Sudden cessation of the medicine was followed by a return of the frequency of the attacks, but gradual withdrawal was satisfactory. Ill effects were seen only twice, and passed away suddenly on suspending the administration of the medicine and giving ten drops of laudanum. In the cough of bronchitis or phthisis cocaine appears to be useless or uncertain.—*Lo Sperimentale.*

HYGIENE.

PREDISPOSITION TO TUBERCULOUS INFECTION.

Professor Birch Hirshfield, of Leipzig, comments on the question of predisposition to tuberculous infection, pointing out that the prevailing theory of direct infection by inoculation of the bacillus is rapidly coming to be regarded as the only important factor in the spread of the disease. Predisposition may be classed as "general" and "local," meaning by the first term a greater or less resistance to the development of tubercle; and by the second, the various factors that incline an individual organ or part to become tuberculous. General predisposition may be inherited or acquired, as in the case of diabetes. Local predisposition may depend upon the condition of the local tissues, the opportunities which they afford for the entrance of the tubuculous virus, and the amount of resistance which they set up against its development. Inherited predisposition is strengthened by the fact that, up to the present time, the evidence of direct conveyance of the disease from mother to fœtus in utero has not been well established in the human species, although undoubted instances have been reported as occurring amoung certain animals. Dr. Birch-Hirschfield relates a case in which a fœtus was removed from the uterus of a women aged twenty-three, within a few moments of her death from general tuberculosis, without any damage being done to the placenta. Portions of the liver, spleen and kidney of the fœtus produced tuberculous disease when inoculated into rabbits and guinea-pigs, but only in the capillaries of the liver could any tubercle bacilli be discovered. In the placenta, however, the villous spaces were crowded with bacilli. The very limited evidence of tuberculous material in the fœtus might serve as an explanation of the fact that children of tuberculous parents are often born without any manifestations of tuberculous disease, and yet appear to develop tubercle during the first few years of life. A limited infection by the maternal bacilli, perhaps during the process of birth, might remain latent in one or more organs until other circumstances contribute to their development. It is thus possible that confusion may exist between "latent tubercle" and "tuberculous predisposition." That latent tubercle may remain quiescent, especially in bronchial glands, until awakened by an attack of acute disease, such as measles or whooping cough, is well known. The frequent occurrence of such latent tuberculous foci, without any other evidence of tuberculous disease, goes far to prove that resistance to tubercle is as powerful a factor as predisposition. The congestive influences of valvular disease of the heart and of emphysema upon the connective tissues of the lungs are examples of some of the mechanical causes which constitute resistance.—*Weiner Medizinische Blätter.*

ALCOHOL AND DEATH-RATES.

In a letter published in the *Times*, Dr. C. R. Drysdale has brought together some statistics as to the effects of alcohol on health which are worthy of preservation. He states that in 1890 the actual claims in the temperance section of the United Kingdom Temperance and General Provident Institution of London were 71.6 per ccnt of the expected claims; whereas, in the general section, the actual claims were 100.2 per cent. of the expected. The Sceptre Life Association, between 1884 and 1888, showed that the deaths of the insured in the general section were 79 per cent. of the expected deaths, as compared with 54.4 per cent. in the temperance section. The Rechabites, a total abstinence friendly society, shows at all ages from 20 to 73 a lower annual death-rate than that of the Ancient Order of Foresters. At the age of 20 the death-rate per 1,000 among the Foresters being 7.29, it is 5.59 among the Rechabites; at 30, 8.07 in the former to 5.12; at 40, 12.0 to 6.46; at 50, 18.65 to 11.97; at 60, 33.66 to 25.15 among the Foresters and Rechabites respectively. The Sons of Temperance also had a very low mortality, not exceeding 7.5 per 1.000 per annum of those insured. After the age of 44 the sickness-rate of the Sons of Temperance seems not to exceed one week yearly up to the age of 54, whereas in the non-abstaining Foresters and Odd Fellows it rises gradually from one week yearly up to the age of 44 to six weeks at 54. At all ages the annual death-rate of the Sons of Temperance is much below that of either the Foresters or Odd Fellows. At all ages from 25 to 65 the annual death-rate of the Rechabites was considerably below that of the Foresters, the healthy males of England

and Wales, and the "healthy males" of twenty life insurance companies. Accidents appear to be commoner and more dangerous among non-abstainers than among abstainers. Thus the Lancashire and Yorkshire Accident Insurance Company gives an abatement of 10 per cent. to all total abstainers on their premiums when they have been insured for a year, as do the Accident Insurance Company and the British Empire Mutual Insurance Company.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

BORAX-BORIC ACID.

The somewhat feeble solubility of boric acid in water (1 in 25) has induced Mr. Jaenicke, of Goerlitz, to search for a substance which would increase its solubility without interfering with its uses. He found borax to be the most suitable. Equal parts of borax and boric acid can be made to crystallize together in form of hard crystals, which are soluble in about 6.5 parts of water at the ordinary indoor temperature, in about 3.3 parts at 100° F., and in about 1.3 parts at boiling. If a hot saturated solution is rapidly cooled, it will separate the excess of the salt, not immediately, but after some time only; hence it is possible to use supersaturated solutions in certain cases.—*Therap. Monatsch.*, No. 9, 477.

ACETONURIA IN THE INSANE.

Drs. Boeck and Slosse, who have been engaged in examining the urine of insane patients for acetone, remark that great care must be employed in the collection of the urine; the flasks must be absolutely full and efficiently stoppered, or, better still, the distillation should be commenced immediately. Lieben's iodoform reaction was found to be the most suitable one for indicating the existence of minute quantities of acetone. Gunning's test may also be used, and if these two give negative results, all others are superfluous. The perchloride of iron test is useless for acetone, but is characteristic of diacetic acid. Acetone may exist in the urine under physiological conditions; its importance depends upon the quantity of nitrogen in the food. A small quantity, therefore, in the urine of insane patients is of no importance whatever. The amount did not appear to have any relation to the mental state of the patient—that is to say, to the existence of such conditions as depression, excitement, fear, or delusions. The quantity of acetone increases considerably when the body is in a state of inanition. It is a good plan, according to Drs. Boeck and Slosse, to commence artificial feeding when a patient who will not eat passes urine containing a large proportion of acetone.—*Lancet.*

NEWS AND MISCELLANY.

THE PAN-AMERICAN MEDICAL CONGRESS AT THE UNITED STATES OF COLOMBIA.

Pursuant to nominations by Dr. Pedro M. Ibañez, of Bogota, member of the International Executive Committee for the United States of Colombia the following organization of the Pan-American Medical Congress has been effected in that country:

Vice-President, Dr. Pio Rengifo, New York; *Secretaries of Sections—General Medicine*, Dr. Ignacio Gutierrez Ponce, Paris; *General Surgery*, Dr. Rafael Rocha Castilla, Bogotá; *Military, Medicine, and Surgery*, Dr. Abraham Aparicio, Bogotá; *Obstetrics*, Dr. Joaquin Maldonado, Bogotá; *Gynecology and Abdominal Surgery*, Dr. Jose M. Buendia, Bogotá; *Therapeutics*, Dr. Manuel Plata Azuero, Guadnas; *Anatomy*, Dr. Joan D. Herrara, Bogotá; *Physiology*, Dr. Antonio Bargas Vega, Bogotá; *Pathology*, Dr. Nicolas Osorio, Bogotá; *Diseases of Children*, Dr. Ant. Gomez Calvo, Bogotá; *Ophthalmology*, Dr. Proto Gomez, Bogotá; *Laryngology and Rhinology*, Dr. Luis Fonnegra, Bogotá; *Otology*, Dr. Carlos Guerra, Bogotá: *Dermatology*, Dr. Daniel E. Coronado, Bogotá; *Orthopædics*, Dr. Juan E. Manrigue, Bogotá; *Naval Hygiene and Quarantine*, Gabriel I. Castaneda, Bogotá; *General Hygiene and Demography*, ——; *Mental and Nervous Diseases*, Dr. Pablo Garcia Medina, Bogotá; *Oral and Dental Surgery*, Dr. Guillermo Vargas Paredes, Bogotá; *Medical Pedagogics*, Dr. Jorge Vargas, Bogota; *Medical Jurisprudence*, Dr. Leoncio Barrets, Bogotá; *Auxiliary Committee* (each member being the official representative of the Congress in his respective city), Dr. Nicolas Osorio, Dr. Andrés Posada Arango, Dr. Jorge E. Delgado, Dr. Eugenio de la Hoz, Dr. Domingo Cagiao, Dr. José Manuel Rodrígues, Dr. Paulo Emilio Villar, Dr. Felix M. Hernández, Dr. Rafael Calvo, Dr. N. Ribón, Dr. Milceades Castro, Dr. Cayetano Lombana, Dr. José M. Martinez, Dr. Isaias Saavedra, Dr. Severo Forres, Dr. N. Villa, Dr. Evaristo Garcia, Dr. Miguel Caicedo, Dr. Emilio Villamizar,.

The following medical societies have been elected as auxiliaries of the Congress, viz. Academia Nacional de Medicina, Academia

de Medicina de Medellin, Sociedad de Medicina del Cauca.

The following medical journals have been designated as official organs of the Congress, viz., *Revistá Médica,* Bogotá; *Revistá de Higiene,* Bogotá; *El Agricultor,* Bogotá; *Boletin de Medicina del Cauca,* Cali; *Anales de la Academia de Medicina de Medellin,* Medellin.

The expressed wish of the profession of the United States of Colombia is for a date of meeting during the Columbian Exposition.

CHARLES A. L. REED,
Cincinnati, Jan. 17th. *Secretary General.*

SALICYLAMIDE.

The pharmacology of salicylamide is the subject of a preliminary communication from Dr. W. R. Nesbitt, of Toronto. As the result of a number of experiments, the author expresses the opinion that for therapeutic purposes salicylamide presents advantages over salicylic acid and its salts, in being free from taste, more soluble than salicylic acid, acting more promptly and in smaller doses, having greater analgesic properties, and being pharmacologically safer. Salicylamide $C_6H_4\begin{cases}OH\\CO.NH_2\end{cases}$ was first prepared by Limpricht, by treating gaultheria oil with concentrated solution of ammonia—a method preferred by the author, as avoiding the possibility of introducing foreign toxic compounds, as might be the case when an artificially produced methyl salicylate is used.

When ammonia and gaultheria oil have stood together in the cold for some days, the liquid assumes a deep reddish-brown color, and separation takes place in brown crystals that can be easily purified by recrystallization. From a saturated solution rapidly cooled it separates in an acicular form, otherwise it occurs in thin, long plates or bunches of plates. By treatment with charcoal, Dr. Nesbitt found it easy to obtain perfectly colorless, thin transparent plates, melting at 142° C., soluble in alcohol, ether, chloroform, and about 250 parts of water. Salicylamide is quite tasteless, but produces a gritty sensation between the teeth. It is excreted in the urine partly unaltered, but chiefly as salicyluric acid. It possesses decided germicidal properties, and it was found that both diastatic and peptic changes are retarded by it, but not to the same extent as by salicylic acid.—*Therap. Gazette.*

PRESENCE OF FATTY ACIDS IN SO-CALLED DEFATTED COTTON.

The *Pharmaceutische Centralhalle* states that M. Leick, having treated a number of specimens of cotton wadding, sold as entirely free from grease, to exhaustion with ether and subsequent distillation, the author obtained in every case a solid etheric extract varying from ½ of 1 per cent. to 1.15 per cent. of the weight of the cotton so treated. This extract reddened litmus paper, and proved to be composed almost entirely of fatty acids, with a minute proportion of resinous matters. The author, continuing his investigations, found that these acids were purposely added by the manufacturers in order to give the wadding a whiter appearance and that crepitant feeling which is peculiar to it. The author concludes that inasmuch that as presence of the acids may be an obj ction under certain circumstances, he would recommend the testing of all "defatted" cotton wadding in the following manner: Weigh out 20 gm. of the wadding, exhaust by ether, and evaporate the latter. After desiccation, the residue should not be more than 3 cg.

EXTIRPATION OF CARBUNCLE.

Dr. Riedel has practiced immediate extirpation of carbuncles since 1883, and finds that this procedure is far preferable to the customary treatment by deep incisions. The operation is performed as follows: A circular incision is made through the skin around the infiltrated area, and from this a number of vertical incisions are made to radiate toward the healthy peripheral parts. At least four cutaneous flaps are thus formed, which are separated from the infiltrated tissues, and then the latter are dissected off from the fascia of the subjacent muscles. The hæmorrhage, which is frequently profuse, is controlled by means of compression and tampons. On the evening of the day of operation the temperature has usually become normal. On the following day the swollen cutaneous flaps are approximated; the opening in the centre provides for drainage. The advantages of this treatment are: 1. A dangerous inflammatory focus is replaced within half an hour by a perfectly harmless loss of substance in the skin and subcutaneous tissue. 2. An extension of the local process or general infection are both excluded. 3. The loss of healthy integument at the periphery of the carbuncle is

reduced to a minimum. 4. For this reason healing takes place rapidly and a good cicatrix results.—*Deut. Medicin. Wochenschr.*, No. 27, 1891.

ANTISEPSIS: PUERPERAL MORTALITY IN PARIS HOSPITALS.

Our own correspondent in Paris last week gave interesting particulars confirmatory of the immense benefits conferred on parturient women by the application of antisepsis to obstetrics. We commend the account to the careful attention of our readers. He says, out of 1340 women delivered in Prof. Tarnier's wards during the past academical year only fourteen died, thus giving the very satisfactory mortality of 1 in 95, or 1.04 per cent. Eight years ago the mortality calculated on the same number of cases reached 2.50 per cent.; while, thirty years ago, one parturient out of eleven, or 9 per cent., died. These figures prove conclusively that modern methods of conducting labor are responsible for the saving, in his wards alone, of 100 valuable lives per annum. This is a very gratifying report of progress and advance, and perhaps our correspondent is right in thinking that the virtue of antisepsis can go no further. Puerperal fever is now unknown in the wards of M. Tarnier, whose memory goes back to a time when he witnessed five deaths in one day from puerperal peritonitis; but there is still room, perhaps, for better results, if we may judge from the experience of some of our London lying-in hospitals. In one of these, during the years 1888 and 1889, there was but one death in 1272 successive deliveries.—*Lancet.*

TREATMENT OF UTERINE FIBROIDS BY COMBINED GALVANIZATION AND FARADIZATION.

Dr. Baraduc has devised a new electrical treatment of uterine fibroids, which consists in the joint use of the galvanic and faradic currents, applying both electrodes to the abdominal walls or on the cervix, and the other to the abdomen. The apparatus consists of a galvanic battery capable of furnishing a current of 250 milliamperes, a coarse faradic coil, and two very moist tampons to be pressed very firmly against the wet skin, so as to localize the current which should invade the uterus at one of its two axes. After one, or perhaps more than one *séance*, a positive diminution may be observed in the mass of the tumor, which is manifested by a depression of the form and size of the electrode, at the side of its application. This percutaneous procedure is based not only upon the contractile, circulatory, and resorbent power of the faradic vibrations, but also, and especially upon its disintegrating and oxidizing action. It is especially applicable to inoperable abdominal fibroids that are impenetrable to the uterine sound. The operation consists of three steps: (1) The application and maintenance by strong pressure of the two rheaphores upon the abdominal walls, or of the cutaneous rheaphore if the other is used *per vaginam*. (2) The established current completely utilized, muscular contraction ceases because of the penetration of the current, which the patient no longer feels, its action being wholly spent upon the tumor. (3) Gradual increase of the galvanic current while maintaining the rapidity of the faradic vibrations. Dr. Baraduc reports one case of immense abdominal fibroid which had been refused operation by Pean, but which was relieved of all urgent symptoms by the combined electrical treatment just described, while at the same time it was reduced in volume one-half.—*Journal de Médicine de Paris*, October, 1891.

ICHTHYOL IN GYNÆOLOGIGAL PRACTICE.

Dr. J. Eschen (*Gynäkologiske og Obstetriske Meddeler*, Bd. 8, S. 281) has used ichthyol in gynæcological cases, according to Freund's, of Strassburg, instructions, with, however, not such astonishing results as many clinicians report. He obtained eczema and universal erythema as side-actions. In some cases, as of metritis, parametritis, oöphoritis and peri-oöphoritis, he obtained good results, but, unfortunately, sometimes the remedy did not respond. The disagreeable eructations following its administration by the stomach were neutralized by the addition of cumarin, four centigrammes (three-fourths of a grain) to each pill.

LIST OF MEDICAL JOURNALS.

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CLINICAL LECTURE.

URTICARIA, PSORIASIS, AND SYCOSIS

By HENRY W. STELWAGON, M. D.,

CLINICAL LECTURER ON DERMATOLOGY, JEFFERSON MEDICAL COLLEGE.

URTICARIA.

Gentlemen: — The first case I have to bring before you this morning represents a disease not at all uncommon. The lesions, which you see are scattered, consist of pinkish-white pea-sized, rounded and flattened elevations, with the peripheral portion of each of a more pronounced tint; here and there they are broader and tend to be linear, appearing as pinkish-white streaks. The eruption is a markedly itchy one, as shown by the existing excoriations and scratch-marks. These several characters of the eruption, coupled with the fact that the individual lesions are fugacious, disappearing in a few hours, and also that similar lesions may be brought out by running the finger briskly over the skin, point unmistakably to urticaria. In almost all cases this disease is an acute one, lasting several hours or days to one or two weeks, rarely longer. In exceptional instances, it is true, the eruption may persist for several months or years, the skin rarely being entirely free from lesions, constituting what is termed chronic urticaria. The lesions themselves are not chronic, as they are usually as evanescent as in the common type of urticaria, but new efflorescences continue to appear and reappear almost indefinitely. The causes of acute urticaria are usually to be found in some disturbance of the digestive tract. Acute indigestion will, in some individuals give rise to an attack. There are those also who cannot eat crabs, clams, lobster or such food without the supervention of acute urticaria; the same may be said of strawberries, and in fact the list could readily be added to. The ingestion of certain drugs is the exciting factor in some cases. The causes of chronic urticaria are not always evident; it is often provoked and kept up by dyspeptic conditions, by disturbances, functional or organic, of the genito-urinary organs, and by a depressed condition of the nervous system.

The diagnosis of urticaria is rarely difficult; it is likely to be confounded with but one disease, and that is erythema multiforme, especially the papular type of the latter disease. The important differences are these: The lesions of urticaria are markedly itchy and are fugacious, the individual efflorescences rarely lasting more than a few hours; they show predilection for covered parts, but with no special localization; the lesions of erythema multiforme are more persistent, usually lasting several days or a week or more, are rarely itchy to an annoying degree, and show special preference for certain regions as the backs of the hands, the forearms, and the lower parts of the legs and the face. The prognosis of urticaria as ordinarily met with is favorable, the attack subsiding, upon removal of the cause, in a few hours or several days. In so-called chronic urticaria the outlook is not, unfortunately, always so hopeful, although most of such cases, if the etiological factors are properly studied and appropriate treatment instituted, will gradually and finally yield.

The treatment of acute urticaria consists in the removal of the cause, usually stomachic or intestinal disturbance, by the administration of saline laxatives and antacids. A laxative antacid deserving of special mention is the ordinary calcined magnesia, a sufficiently large dose being given to produce free action of the bowels. Or an ordinary saline, such as Epsom or Rochelle salt, or Hunyadi water may be prescribed, and an antacid such as sodium salicylate or bicarbonate administered in five grain doses three or four times daily. Emetics are sometimes advised for removing the offending material

from the stomach, but this is only called for in those exceptional cases of urticaria in which the mucous membranes of the throat share in the eruption, the patient's breathing being seriously interfered with. In the present case intestinal sluggishness, as evidenced by constipation, a coated tongue, etc., point toward the treatment to be advised. A mildly laxative dose of magnesia, repeated daily for a few days if the eruption persists, will, in all probability, be all that is needed. One point to be brought out in connection with the present case is the possibility of the eruption being due to medication. The patient has been in the hospital for fifteen days and he has had urticaria for thirteen days, a suspicious coincidence; he is subject to phthisis, and is in the hospital and is under treatment for that disease. The several drugs commonly given to control cough in bronchial or pneumonic conditions are opium, chloral, etc. Moreover, not infrequently the balsamic oils, such as oil of copaiba, or oil of turpentine, are given for their action upon themucous membranes. These several remedies are in certain subjects capable of causing urticaria, and must be, as in this case, eliminated as the acting cause. For chronic urticaria successful treatment depends upon the discovery and proper appreciation of the etiological factor or factors in the individual case, and their correction or removal by appropriate remedies. Generally speaking, exclusive of those cases demanding tonic treatment, the remedies most frequently of service are sodium salicylate, belladonna or its alkaloid atropia, ergot in full doses, and the various mildly laxative alkaline mineral waters.

In all the more marked cases of urticaria external applications for the relief of the itching are to be prescribed. Among the most efficient may be mentioned carbolic acid lotions, one to three drachms to a pint of water, to which a drachm of glycerine and one or two ounces of alcohol may be added; a lotion of thymol, the carbolic acid of the above being replaced by fifteen to sixty grains of thymol and lotions of equal parts of vinegar and water.

PSORIASIS.

The second case, now exhibited to you, is one of marked type and extensive development. You see on this man's forehead the sharply-defined border of inflammatory eruption which extends from the scalp. The border is not straight, but is evidently made up of contiguous rounded patches which have become confluent, giving rise to a wavy line. The same condition is seen behind the ears extending from the scalp, and the same also upon the neck posteriorly; in these two latter regions one or two quarter-dollar sized rounded, inflammatory, scaly, sharply-defined patches remain distinctly separated from the main eruption of the scalp. The face, as often occurs in this disease, is free. The diagnosis may readily be made from a study of the eruption upon these parts without inspecting the general surface. The diseases suggested are eczema, of the squamous type, and psoriasis. Were the eruption of a milder and less inflammatory type, seborrhœa would also have to be considered in the diagnosis. Eczema is to be excluded by the facts that it is rarely so scaly as the eruption before us, it never limits itself by such an abrupt and sharply-defined border, and it does not occur in rounded, sharply-defined patches as here seen back of the ear and on the neck. Moreover, the disease in this case has always been dry; in an eczema of long duration, whatever its prevailing type, there is usually evidence or a clear history, at one time or another, of the characteristic oozing of that disease. On the contrary, all the characters of the eruption before us as already briefly described, show the disease to be psoriasis. Now, as soon as this man's body is uncovered you see that the same characters as seen in the eruption upon the scalp and contiguous parts are presented, and as is always the case, much more clearly and emphatically. Here are a few pinhead—the beginning lesions—numerous pea-, dime-, half-dollar-, dollar-, and palm-sized, sharply-defined, inflammatory scaly patches, in some places becoming confluent and covering large areas. The disease as seen in this patient is unusually extensive, and is much more so than the average case of psoriasis met with. Upon inquiry we find that this man has had the disease for eight years, during which time it has varied considerably, once or twice the skin being almost entirely free. In the milder types of psoriasis the eruption will frequently disappear entirely during the warm months. In the milder type also, there may be some difficulty in distinguishing the eruption from the papulo-squamous syphiloderm, but usually in the syphiloderma several or more purely papular and characteristic lesions may be found, and other symptoms of syphilis may be commonly discovered. In the particular case before you, the eruption could not be confounded with any syphilitic manifestation, the patches are too large, too red, too scaly, and the disease of too long duration; the papulo-squamous syphiloderm is an affair of months, not of years, as psoriasis usually is.

As to the cause of this disease, we know little, the subjects, as a rule, being in a good or fair condition of health. It would seem that in many instances it is an expression of the lithic acid diathesis.

About the treatment, fortunately, we know much more, and in many cases the eruption may be quickly, that is, in the course of several weeks or a few months, removed. Of the few internal remedies useful in the constitutional treatment of this disease, two should be especially referred to. One is arsenic and the other alkalies. In the moderately or markedly inflammatory type represented here, arsenic may or may not do good, and if prescribed, must be used with caution, as the disease when of this type is sometimes made worse by its employment. On the other hand this is just such a case in which you expect the best results from the administration of alkalies. This man is in good health, strong, robust, of good color, and the eruption is of the actively inflammatory type, and in such patients and in this type eruption, alkalies are especially indicated. The favorite, and upon the whole the most available one, is liquor potassa, administered in dosage from five to thirty minims, largely diluted, three times daily. We shall prescribe that remedy in this case, beginning with ten drops and rapidly increasing to twenty. As to the external treatment, the first essential, as in all cases of psoriasis, is to get rid of the scales. This will be most readily accomplished by means of repeated warm alkaline baths. The patient will be directed to take a daily bath. made up of six to eight ounces of the sodium or potassium carbonate to sufficient water to cover himself when in the recumbent position—about thirty to forty gallons. He should remain in this bath for fifteen to thirty minutes, and the warmer the bath the more effective. After a few baths of this kind the probability is that the patches will be entirely free from any scaliness. Should this not be the case, or should this method prove slow, which exceptionally happens, then the scaly areas are to be washed with sapo viridis and hot water, just before he enters the bath. During treatment, and often as an essential part of it, these baths will have to be repeated from time to time. The external remedy to be advised in this case, which is admirably suited for the class of cases this represents, is chrysarobin. It is best applied as a paint. One to two drachms to the ounce of collodion to which five minims of castor oil are added, will be found a convenient formula. Or the paint may be made of chrysarobin and a solution of gutta-percha. The one selected is painted over the patches, the paint immediately drying into a more or less elastic film. At the end of a day or two, from detachment or from cracking of the film, a repainting will be found necessary, and so on, until applications are no longer needed. Usually, at the end of a week or ten days the application must be intermitted, owing to the tendency to dermatic inflammation of the surrounding skin to which it gives rise. At such times a mild ointment may be applied. This remedy is not applicable to hairy parts, and, as it is a strong one, must be used with care and judgment. It is a good rule not to use it about the face or scalp. Tar ointment, in officinal strength or weakened, is another valuable application and one of probably more general use than chrysarobin. It is to be well rubbed into the diseased areas once or twice daily. The use of a dusting powder after tarry applications renders its use much less unpleasant. To the face and scalp either the tarry ointment will be applied or an ointment of ammoniated mercury, forty to sixty grains to the ounce.

SYCOSIS.

The third case is, as you see, one in which the eruption is only on the face, and a fact that will immediately strike you is that the eruption is confined to the beard. It has lasted several years and has never shown any disposition to extend beyond the bearded region. This fact is of great help in aiding you to reach a correct diagnosis, for it immediately brings the probable diagnosis to either non-parasitic sycosis or parasitic sycosis. Examining the eruption more carefully, you will see that it consists of a more or less diffused redness, some slight infiltration, and here and there some discrete papulo-pustules and pustules, each pierced by a hair. There is no perceptible hair loss, and no lumpiness of the parts. Parasitic sycosis–tinea trichophytina barbæ, barber's itch—is readily excluded by the absence of conspicuous hair loss, absence of lumpiness, and the non-involvement of the hairs; these being firmly seated and neither brittle nor broken. On the other hand, you find the symptoms correspond exactly with those of non-parasitic sycosis—sycosis, folliculitis barbæ. This latter is a follicular inflammation of the bearded region, characterized by varying degrees of inflammatory action, with, usually, numerous minute papules and pustules, each pierced by a hair, and with little tendency to positive hair loss. No lumpiness occurs in this disease. If still in doubt between the two diseases in a case of this kind, extract some of the hairs, and ex-

amine with a power of three to five hundred diameters; the fungus is readily found if the disease is parasitic sycosis. The etiology of sycosis is obscure. Like most pustular processes it is probably microbic, but even accepting this, we would yet be ignorant of the necessary underlying or predisposing conditions. Internal treatment is of questionable service. Tonics should be prescribed if the tate of the patient's general health indicates heir use. In some instances calx sulphurata, in one-tenth to one-fourth grain dose several times daily, seems to be of some value. The external treatment is, however, that upon which reliance is to be placed for successful results in this disease. If the parts are actively inflamed, the hair is to be clipped short and mild and soothing applications made for a few days. At the end of this time, and at the very start in the average case met with, shaving is to be advised. This is somewhat painful for the first two or three times, but is of material aid in curing the disease. Personally I should hesitate to treat a case of sycosis unless the patient be willing that the parts be shaved every day, or second day, as circumstances demanded. Instead of shaving epilation may be practised. This is useful, but in my experience is objected to much more frequently as being more painful than is shaving. In all cases those hairs around which there is considerable suppurative inflammation, should be extracted, so as to save the involved follicle from possible destruction. Several remedies for you to remember in connection with the external treatment of this disease, one of which will be prescribed in the case before you, are precipitated sulphur, ichthyol, and Vleminckx's solution. These are exeeding valuable, and if used with judgment, will often lead to a successful result. Precipitated sulphur is prescribed in ointment form, one to two drachms to the ounce. A valuable combination is the following, although it be open to the objection of chemical incompatibility: ℞ Precipitated sulphur, ʒ jss.; balsam of Peru, ʒ ss.; diachylon ointment, ʒ vi. If a good quality of diachylon ointment is not obtainable, cold cream or equal parts of petrolatum and lard may be substituted. This, as all stimulating ointments in the treatment of this disease, is to be well rubbed in, morning and evening. Ichthyol is prescribed in ten to twenty-five per cent. ointments; or it may be prescribed with sulphur with any ordinary ointment base. Vleminckx's solution, the remaining important remedy I desire to mention, is to be applied weakened with five or six parts of water, the affected region being thoroughly dabbed with it for several minutes night and morning. The strength of this application should be gradually increased, stopping just short of irritation. In conjunction with this solution it is necessary to employ a mild ointment, either a mild ichthyol or sulphur ointment, from time to time, to counteract the dryness and scaliness produced. The strong tendency to recurrence exhibited by this disease, will be greatly lessened if shaving is practised for several months or a year or more after the existing symptoms have been removed.

COMMUNICATIONS.

THE INFLUENZA BACILLUS.*

I.—PRELIMINARY COMMUNICATION ON THE EXCITING CAUSES OF INFLUENZA.

By Dr. R. PFEIFFER,
BERLIN, GERMANY.

The following results are based on the accurate examination of 31 cases of influenza, in 6 of which a necropsy was made. A complete report will be published as soon as possible.

1. In all the cases of influenza a bacillus of a definite species was found in the characteristic purulent bronchial secretion. In uncomplicated cases of influenza these tiny bacilli were found in absolutely pure cultures, and mostly in immense quantities. They were very frequently situated in the protoplasm of the pus corpuscles. If the influenza had attacked persons whose bronchial tubes were already otherwise diseased—as, for example, phthisical patients with cavities—other micro-organisms besides the influenza bacilli were found in the expectoration in variable quantity. The bacilli may penetrate from the bronchial tubes into the peribronchitic tissue, and even reach the surface of the pleura, where, in two cases examined *post mortem*, they were found in pure cultures in the purulent exudation.

2. These bacilli were found exclusively in cases of influenza. Very numerous control examinations proved their absence in ordinary bronchial catarrh, pneumonia, and phthisis.

3. The presence of bacilli kept equal pace with the course of the disease; with the cessation of the purulent bronchial secretion the bacilli began to disappear.

**Deutsche Medicinische Wochenschrift and British Medical Journal.*

4. I had already seen and photographed similar bacilli in the same enormous quantities two years ago, during the first epidemic of influenza, in preparations of the sputum of patients suffering from the disease.

5. The influenza bacilli appear as very tiny rodlets, of about the thickness of the bacilli of mouse septicæmia, but only half the length of these. One often sees three or four bacilli strung together in the form of a chain. They stain with some difficulty with the basic aniline dyes. Better preparations are obtained with dilute Ziel's solution and with hot Loeffler's methylene blue. In this way it can be seen almost, as a rule, that the two ends of the bacilli take the stain more intensely, so that forms are produced which can only with great difficulty be distinguished from diplococci or streptococci. In fact I am inclined to believe that some of the earlier observers also saw the bacilli described by me, but that, misled by their peculiar behavior with regard to staining agents, they described them as diplococci or streptococci. They cannot be stained by Gram's method. In hanging drops they are immobile.

6. These bacilli can be obtained in pure cultures. On 1½ per cent. sugar agar the colonies appear as extremely small droplets, clear as water, often only recognizable with a lens. Their continued culture on this nutrient medium is attended with difficulties, and up to the present I have not succeeded in carrying it beyond the second generation.

7. Numerous inoculation experiments were made on apes, rabbits, guinea-pigs, rats, pigeons and mice. Only in apes and rabbits could positive results be obtained. The other species of animals showed themselves refractory to influenza.

8. In view of these results I consider myself justified in pronouncing the bacilli just described to be the exciting causes of influenza.

9. It is very probable that infection is produced by sputum charged with the germs of the disease; and the disinfection of the sputa of patients suffering from influenza is therefore urgently required as a prophylactic measure.

Addendum—Dr. Kitasato has succeeded in cultivating the influenza bacilli to the fifth generation on glycerine agar.

Sneezing favors the expulsion of the child in a case of labor, hence the use of tobacco snuff or pepper, or other substances that will bring on the paroxysm by irritating the scheneiderian membrane, will hasten a tardy delivery.

II—ON THE INFLUENZA BACILLUS AND THE MODE OF CULTIVATING IT.

By DR. S. KITASATO.

It is, perhaps, remarkable that in the case of a disease which, in the last few years, has attacked hundreds of thousands of persons, the specific exciting causes have, in spite of extremely numerous investigations, only lately been discovered. The cause, in my opinion, lies in the extreme difficulty of cultivating the tiny bacillus here before you; and, without pure cultures, the bacteriologist cannot, of course, come before the public with a new specific micro-organism.

The difficulty of obtaining cultures of specific bacteria present in the sputum depends chiefly on the great contamination of them with micro-organisms from the mouth, etc. The latter, in consequence of their more luxuriant and abundant growth, can, on our artificial nutrient media, completely overgrow and hide the particular parasites sought for. This occurs all the more easily the longer the specific parasitic micro-organism in question takes to form colonies, as, in fact, happened in the case of the tubercle bacillus.

With the view of avoiding the obstacles standing in the way of a successful cultivation, Privy Councillor Koch has devised a method, which has not yet been published, which enabled him many years ago, and myself again quite recently, to obtain pure cultures of tubercle bacilli directly from the sputum, and which has also been followed by me in the pure cultures of tubercle bacilli here before you. The method to which I have just referred will be published in full detail in an early number of the *Deutsche medicinische Wochenschrift.*

With regard to the characteristics of the pure cultures of influenza bacilli here before you, I may emphasize the following points: On a sloping surface of set glycerine agar the individual colonies present themselves as extremely small points like droplets of water, recognizable during the first twenty-four hours only with the aid of a lens, so that microscopically a test tube containing them can scarcely be distinguished from a sterile one. The individual colonies are, as has been said, so unusually small that they may easily be overlooked, and it may thus have happened that previous investigators have overlooked them.

If a culture obtained from such a colony is placed on a new nutrient agar medium, numerous small colonies arise on the moist agar surface, as may be seen in this tube. A

particularly remarkable point about them is that the colonies always remain separate from each other, and do not, as all other species of bacteria known to me do, join together and form a continuous row. This feature is so characteristic that the influenza bacilli can be thereby, with certainty, distinguished from other bacteria.

The possibility of continued cultivation is now demonstrated, and the tubes here before you already form the tenth generation in pure cultures. On gelatine they do not grow, as they do not generally multiply at a lower temperature than 28° C., which is the temperature at which gelatine solidifies. In *bouillon* they grow scantily. In the first twenty-four hours single white particles are seen swiming in the *bouillon*, the intervening fluid being perfectly clear. Later, they sink to the bottom and there form a white, woolly mass, filling the end of the test tube, whilst the supernatant *bouillon* remains entirely clear—a proof that we have to deal with an immobile bacillus. In conclusion, I may remark that I have accurately studied with the microscope, and by culture, for a long time back the sputa of tuberculosis in respect to all the micro-organisms occurring therein besides the tubercle bacillus, and also the sputa of pneumonia, bronchitis, etc.; but the present bacillus, so extraordinarily characteristic in its cultures, and so easy to be recognized, has not come within my experience except in influenza patients.

III.—ON A MICRO-ORGANISM IN THE BLOOD OF INFLUENZA PATIENTS

By Dr. P. CANON,
ASSISTANT-PHYSICIAN, BERLIN.

During the last few weeks I have, under the direction of Dr. Guttmann, examined the blood of twenty influenza patients in stained preparations, and in almost all cases I have found in the blood one and the same micro-organism. The examination of the blood was made in the following way: A drop of blood obtained by pricking the finger was received on a perfectly clean cover-glass; this cover-glass was placed upon another one, and the two then drawn apart. The preparations, after they had been thoroughly dried, were placed in absolute alcohol, in which they were left for at least five minutes. They were then taken out and placed in the following staining solution (Czenzynke's solution): ℞ Concentrated watery solution of methylene blue, 40 grammes; ½ per cent. eosin solution (dissolved in 70 per cent. alcohol), 20 grammes; distilled water, 40 grammes. The cover-glasses immersed in this staining solution were placed in an incubator at a temperature of 37° C., and left there from three to six hours, when they were washed with water, dried, and embedded in Canada balsam. In the preparations of blood made in this manner where the red blood corpuscle were red, and the white ones blue, I found the above-mentioned micro-organism. It is found stained blue, sometimes in large quantities, but mostly sparingly, and only to be identified after a long search (about 4 to 20 in the preparation). Sometimes it appears as a small diplococcus, sometimes, especially when it is more deeply stained, as a short bacillus. In six cases I have found it also in numerous larger and smaller heaps of from 5 to 50 individual microbes with a very characteristic appearance. In these six cases the blood was drawn during a fall of temperature or shortly afterwards; in three of these no further rise of temperature occurred. From three to six days later I failed again to find the micro-organism in the blood in these three last cases. Sometimes I have been able to make the diagnosis of influenza when clinically it was not certain, by means of preparations of the blood alone. I have also found the bacteria in the blood, and, indeed, in considerable quantities in cases where there was no appreciable local lesion, and especially no cough or expectoration. Whilst making the preparations I have generally at the same time made streak inoculations of the blood on agar, glycerine agar, sugar agar, and *bouillon*. In six cases the *bouillon* was injected into mice, partly at once, partly on the following day after it had been in the incubator. These inoculations and experiments on animals always yielded a negative result. As on the basis of my researches, I am of opinion that this micro-organism occurs in the blood of all persons suffering from influenza (at least, in that of those who have fever), and as it is not found in the blood of other persons, and as it is a micro-organism hitherto unknown, I believe that it stands in direct relation to influenza.

Privy Councilor Koch had the goodness to examine some of my preparation—for which I tender him my best thanks—and pointed out that the micro-organism visible in them was identical with the bacterium found by Staff-Surgeon Dr. Pfeiffer, which has been described in the preceding paper, which is published at the same time as mine. I began these researches about the middle of December; I have, however, still a large

number of preparations to stain and to examine. I propose to publish the results of the further research in a later communication. I have to thank Dr. Guttmann and Professor Dr. Sonnenburg, Director of the Surgical Section of the hospital, for kindly placing patients at my disposal.

IV.—SOME REMARKS ON THE INFLUENZA BACILLUS *

By E. KLEIN, M.D., F.R.S.,

LECTURER ON GENERAL ANATOMY, ETC., ST. BARTHOLOMEW'S HOSPITAL.

The account published in the *British Medical Journal* of January 16th, 1892, of the observations of Pfeiffer and Kitasato on the constant and copious occurrence, in the bronchial secretion in cases of influenza, of a species of minute bacilli, well characterized morphologically and culturally, as also the observations of Canon on their occurrence in the blood of influenza cases induce me to give an account of some observations which I have made during the end of December, 1889, and the beginning of January, 1891, that is, during the early presence of the epidemic in London. By the kindness of Dr. Stephen Mackenzie I was enabled to see and examine cases of influenza in the acute stages at Dr. Barnado's home, which I think were amongst the first cases which occurred in London.

Examination of the Blood.—The blood was examined in cover-glass specimens dried in a thin film, stained and mounted, and in cultivation on gelatine and on ordinary nutrient agar. The cases were those of boys between 10 and 15 years of age; all were in the febrile stage, ranging from a few hours to twenty-four hours since the first symptoms appeared. In one out of these six cases there were present in the cover-glass specimens—stained in rubin first, then in methyl blue anilin water—comparatively few minute bacilli; they occurred singly, a few as dumbbells, and only rarely as small groups. As regards thickness, length, and polar staining, they compare completely with those described by Pfeiffer and Canon, but some of the bacilli were quite as long as those of the mouse septicæmia with which Pfeiffer compares them. In the remaining five cases no bacilli of any kind could be discovered in the specimens. All the tubes inoculated with the blood of these six cases remained sterile.

Examination of Bronchial Sputum.—This was examined in three early cases, which had passed a few days previously through the acute febrile stage and were without fever when examined; they had bronchitis with fairly copious greyish purulent sputum.

Case I.—E. F., a lad about 16 years of age, had a febrile attack for two day, and was kept in the infirmary for several days afterwards. Sputum, after well rinsing out the mouth, was brought up and used for cover glass specimens and afterwards for cultivations. The cover-glass specimens revealed a condition such as is described by Pfeiffer of some of his uncomplicated cases, namely, minute thin bacilli in larger and smaller clumps, and in some places almost like a pure cultivation. The bacilli are about the thickness of the bacilli of mouse septicæmia, half their length, and in well stained specimens most of them show the characteristic polar staining pointed out by Pfeiffer; but I find amongst the group of bacilli a good many that are quite as long as the bacilli of mouse septicæmia. From this sputum cultivations were made in the following manner: A particle of the sputum was placed in a few cubic centimetres of sterile salt solution contained in a sterile test tube, well shaken, and from this dilution gelatine tubes, broth tubes and agar tubes were inoculated. The broth and agar tubes were incubated at 37° C. Some of the broth tubes became turbid after twenty-four hours, others remained perfectly limpid and already after twenty-four to forty-eight hours showed at the bottom of the fluid glassy fluffy masses which increased in amount on the following days, the supernatant broth remaining quite clear. When shaken the fluffy masses broke up easily into filamentous translucent flakes. In the agar tubes there also appeared growth; in some tubes a few translucent colonies looking like flat droplets of water, other colonies opaque and white. In the gelatine tubes there appeared only liquefying white colonies.

Subcultures were then made of the broth tubes which contained only the fluffy glassy growth at the buttom of the fluid. The subcultures were made on gelatine, on agar, and in broth. The gelatine tubes kept at 20° C. remained sterile; the agar tubes incubated at 37° C. developed colonies of exactly the same kind, which in all respects compare with those described by Kitasato: circular small translucent droplet, with no tendency to become confluent. In the broth tubes incubated at 37° C., the growth was characteristic, namely, while the broth remained perfectly limpid there developed at the bottom of the fluid the characteristic glassy fluffy masses; these were noticed already after twenty-four hours, but became more conspicuous after forty-eight to seventy-two hours.

One fact which on further subcultures became very conspicuous was the rapid death of the cultures, both on agar and in broth, but more so in the former than in the latter. The agar cultures already after a week failed to yield new subcultures; the broth tubes after from ten days to a fortnight lost their vitality.

Cover-glass specimens made of the fluffy masses from the broth cultures and of similar fluffy masses in the condensation water of the agar cultures showed the growth to be entirely made up of strings and filaments; each filament is composed of short thin rods, some stained uniformly, the great majority, however, showing a granule at each end;

* From last issue of *Brit. Med. Jour.*

for this reason the filaments look exactly like streptococcus chains composed of dumbbell cocci, but the presence amongst them of uniform bacillary elements without polar staining proves the organism a leptothrix of minute bacilli. The specimens are very remarkably uniform and striking, being entirely made up of these filaments, interlacing and in bundles. Cover-glass specimens made of the colonies grown on agar show also filaments, but a good many groups of the minute bacilli; the groups more completely resembles in appearance the groups that were seen in the sputum. The organisms of all the cultures stained well in rubin (2 per cent. watery solution), in methyl blue anilin water, or in gentian violet anilin water. I have large number of these specimens, and on examining a them with only a moderately high power, the filaments could not be distinguished from streptococci made up of diplococci, but under an oil immersion their bacillary character is easily asertained. each diplococcus being really a short bacillus with a stained granule at each end. In all specimens, those of broth culture, of agar condensation water, and of colonies on agar, there are present in the filaments numerous elements which, owing to their great thickness and irregular shape, compare with involution forms; in broth cultures they are numerously present already after forty-eight hours.

From this it is seen that what is here stated of the bacillus, in the sputum in broth and agar cultures, completely coincides with and confirms what is described by Pfeiffer and Kitasato. One appearance which is not mentioned by Kitasato or Pfeiffer in their preliminary account, and which seems to be a very striking appearance, is that the growth in broth is entirely made up of filaments.

Case II.—The second case in which the sputum was examined was J. M., a lad about 14; had bronchitis after the febrile stage had passed. When I saw him he had no fever, and was about the seventh or eighth day after the first onset of the disease. The cover-glass specimens of this sputum revealed also changes of the same minute bacilli; there was no dificulty in finding the bacilli in the substance of the pus corpuscles, but there never were more than a few bacilli in each one corpuscle. Most of the bacilli showed the polar-stained granules. Also from this sputum, after dilution, successful broth cultures were obtained the same glassy fluffy masses at the bottom of the broth, which was otherwise limpid.

Case III.—The third case was that of a young man, A. A., aged about 20. Had bronchitis for several days after the febrile attack, but was getting better. Not much sputum could be got from him; cover-glass specimens showed some of the minute bacilli, either single or in small groups, but neither were they present in large masses, nor could they be found in the pus cells. Cultivations in broth and on agar failed to produce the characteristic growth.

The broth cultures obtained from cases E. F. and J. M. were used for inoculation of a number of mice and guinea-pigs, but no result, local or general, was produced.

In every case of gonorrhœa warn your patient of the danger of conveying the disease to the eyes by the fingers, and of the fearful results of gonorrhœal ophthalmia.

V.—CONCERNING INFLUENZA.*

ITS HISTORY.

The whole of the English-speaking people, nay, the world, has within the last few days been most feelingly persuaded of the present power of influenza. A prince of great though quiet promise has fallen in our midst, and a great churchman has been taken from his long but not yet finished work. These events have excited a profound interest, and, with the private and personal losses which are felt on every hand, have sufficed to concentrate an unprecedented attention on the subject of epidemic influenza. Panic on such occasions as this among the general public and their teachers, frequently alternates with apathy. But if the panic, which has undoubtedly arisen, can be turned to a useful and healthy purpose, the great sufferings the nation has undergone will not be in vain. Of the history of influenza, enough and more than enough is known; it is one of the recorded diseases of antiquity, and we have sufficient evidence to show that in all probability the epidemic under which we now lie is the same as those of the past ages. We can only here instance that some Hebrew antiquarian authorities hold that in the Talmud are to be found records of a very similar, if not identical, pestilence; that the researches of Dr. Clemow have thrown much curious light on similar visitations affecting Europe in the Middle Ages, and that the classic work of the late Dr. Theophilus Thompson connects our present with these past records in an unbroken chain of evidence.

In the bright light of modern research it may perhaps appear merely historical to note that among the first clear upholders of the germ theory of disease were our countrymen Dr. Richard Dunning and Sir Henry Holland, the latter of whom, in a remarkable and almost prophetic paper, dimly foresaw that organic cloud which now occupies the whole attention of some of the most enterprising of our profession. Sir Thomas Watson, in his *Principles*, adopted and disseminated this view of Holland's and took as a working hypothesis, a sheer hypothesis, in his own words, that "like yeast in beer we may conceive that diseases produced by animalcules (microbes) may thus infect the fluids of the body and become contagious in the fullest sense of that term."

THE THEORY OF CONTAGION.

The theory that influenza is mainly if not entirely spread by contagion is no new one,

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*Editorial in last issue of Brit. Med. Journ.

bu this idea has needed to be born again. The careful evidence collected by Gray and Haygarth in the past, and the Local Government Board Report of Dr. Parsons in the immediate present, show, to quote Dr. Buchanan's pregnant words in his preface to this report, that "Influenza is an eminently infectious complaint, communicable in the ordinary personal relations of individuals one with another." Influenza having been thus authoritatively asserted to be infectious, how can this conclusion be practically applied in the direction of prevention? Various prophylactics have been recommended; these may or may not be of use, but the only reliable course to stay the spread of the disease is that, where practicable, persons affected with influenza should be isolated, and that healthy persons should, as far as possible, avoid being exposed to chances of infection. Anyone who has influenza is in duty bound to do all that in him lies by avoiding places of public resort, and by refusing to mix freely among his friends to hinder his becoming a disseminating centre of sickness and of death. Much is to be hoped from a general recognition of this truth by the profession and the public, more, indeed, than from the too strenuous application of any powers already possessed by public medical authorities. This part of the question deserves, therefore, a more close study, towards which the paper by Dr. Richard Sisley, which we publish in another column, is an interesting contribution.

SANITARY ADMINISTRATION.

Sanitary science during the last half-century has won so many triumphs over infectious diseases, has learnt so well how to diminish the severity and extent of epidemics which it does not yet know how to suppress altogether, that the public are beginning to demand that it should seriously attempt to grapple with the disease which we in this country have elected to know by the name of influenza. The Society of Medical Officers of Health, at their meeting on January 19th, passed a resolution on the subject which is worthy of a little examination. The resolution set forth that in the opinion of that Society "influenza is a dangerous infectious disease." To some this resolution may seem a belated expression of opinion. The view was very clearly expressed by Dr. Buchanan in his preface to Dr. Parson's Report. The resolution, however, is not, it may be presumed, intended to be a mere pious opinion, but to be a basis for future preventive measures. What is to be the nature of the action to be taken?

The question is not easy to answer. Are we to understand that the epidemics of influenza are to be met in the future by the application of the ordinary methods of sanitary adminstration? The two great principles of modern hygiene have been the removal of unfavorable conditions in the environment—bad drainage, insufficient ventilation, over-crowding, and so forth—which tend to make communities sasceptible to the inroads of disease, and the isolation of persons actually suffering from infectious maladies. As to the first of these procedures we may claim to have seen some result from what has already been accomplished in this country, since the effect of the recent and present epidemics of influenza on the death-rate has been less in this country, on the whole, than in any other. As to the other methods of sanitary administration, it is doubtful how far they are applicable to influenza.

Dr. Buchanan, in the preface from which we have already quoted, after observing that the disease had been shown to belong to a "class of diseases over which we exercise a measure of control," goes on to admit that "from what we have thus far seen of the specialities of influenza, we cannot feel particularly confident of our ability, under the existing conditions of society, to successfully defend ourselves against a further outbreak." Notification has been suggested as though it were a kind of panacea; but what use could be made of the information thus obtained? As is well shown by Dr. Sisley, long before it could be acted upon the mischief would have been done. The disease is certainly infectious in a very early stage, and the symptoms are so largely subjective that it may well be doubted whether notification would result in bringing to light the earliest cases. If this be so, it is certain that it would be useless at a later stage of an epidemic in any given locality. When two-thirds of the households, and perhaps not far short of a fourth of the adult population, are suffering from the disease, is isolation of the sick anything more than a dream? It is quite a different thing with such diseases as scarlet fever or even measles. The objective symptoms are obvious, and one attack is an almost perfect protection from another. It is not unreasonable to punish a man who exposes himself, or a person under his charge, in a public conveyance while suffering from scarlet fever; would public opinion sanction similar punishment of a man who felt a little ill, or had the symptoms of a more than usually severe cold, and went home in a public conveyance?

The truth is that before we can attempt to stay the pandemics of influenza we must know a great deal more about it. As Dr. Buchanan has said, "For better means of repressing influenza our expectation must be in an understanding of the natural history of the disease." We do not know whence it comes, we do not know for certain how it spreads—whether mainly by air, water, or even by fomites; we do not know whether the complications which render the disease so much more formidable than it would otherwise be are due to the primary infective agent, or whether they are produced by a secondary infection, as was generally supposed during the epidemic of 1889-90; we do not know whether the disease which frequently attacks horses and other domestic animals at about the some time as mankind is the same disease or not; and, lastly, we do not even know the measure of protection which one attack affords against a second.

It is reasonable to hope that the researches now being carried on in Berlin may result in placing valuable practical methods of dealing with the disease in our hands. We were enabled to publish last week translations of the important papers by Pfeiffer, Kitasato, and Canon, which appeared in the *Deutsche medicinische Wochenschrift* of the same week. They deserve careful study. The proof that the bacillus described is the *vera causa* of influenza is not absolute, but there is very strong presumption that it is. Much may be learnt from the study of the life-history of this microbe, but even then much will remain to be learnt as to the "natural history" of the disease. The Government of this country may very fairly be asked to contribute its share to the inter-national study of the pandemic. Dr. Parson's Report is a valuable document, and any future inquiry would have the advantage of starting where he left off; but a great many questions remain to be answered, some of which we have indicated above.

SYMPTOMS AND TREATMENT.

A rational systematic mode of treatment is of course impossible, so long as the etiology remains obscure, and hence we have at present to rely upon the main symptoms for indications. The sudden onset of febrility, the spinal tenderness so commonly met with, the pains in the limbs, the photophobia, the pronounced lassitude and anorexia, and lastly the tendency of the temperature to sink below the normal when convalescence sets in—all these facts point to the severe impression made by the infective virus upon the cerebro-spinal nerve-centres. Accordingly, it is of great importance that the patient should early have rest and warmth in bed, that the diet should be of a supporting character, and that he should remain in bed till all danger of complications has passed away. These simple points appear mere truisms, but they constitute the best preventive against the insidious development of catarrhal pneumonia, the great danger to be guarded against. It is not advisable to attempt to cut short the malady by active diaphoretic measures; abundant experience has shown the futility of such treatment. Rest, warmth, and nourishment constitute the tripod of treatment. Domestic isolation is strongly to be recommended for the sake of others.

In respect to drug quinine has been found useful by some, who have even gone so far as to declare it a prophylactic. Small doses of opium constitute a powerful support to the central nervous system, but this drug should be used with caution if any bronchitis is present, and abandoned altogether if signs of capillary bronchitis supervene. A combination of salicylic acid and antipyrin has been lately put forward under the name of salipyrin, and it is claimed for this mixture that it does not depress the system as does either of the constituents taken alone. It certainly deserves a trial, but its effects should be carefully watched. Salicylate of quinine is probably a still better preparation, but the salicylic acid employed should be naturally, not synthetically, obtained. The natural product is far less depressing than its artificial substitute. Good suceess is claimed for an antiseptic (carbolic acid) treatment but it remains for a larger experience to determine with what correctness.

It will generally be found that alcoholic stimulants are well tolerated in influenza, but they should not be given to such an extent as to disorder the digestion. During convalescence the patient should still keep quiet and warm for some time, and not be in a hurry to resume the ordinary avocation. The various psychoses which have been recorded after influenza plainly show that this disease is a powerful depressant of the central nervous system, and it is often several weeks before the patient again enjoys the usual vigor of mind and body. The insidious onset of pulmonary mischief afterwards is also best guarded against by keeping the patient in a uniform temperature. Iron, acids and quinine will be found useful in hastening convalescenec.

Strychnine is used as an antidote for snake bite in Australia.

THE PART THE SHOULDERS PLAY IN PRODUCING LACERATION OF THE PERINEUM, WITH SUGGESTIONS FOR ITS PREVENTION.

By W. D. HAGGARD, M. D,,
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The most important point connected with the second stage of labor, and the most delicate task the accoucheur has to fulfill is to properly care for and protect the perineum during the exit of the child's head and shoulders.

The wide divergence of opinion prevailing among the ablest and best authors on obstetrics with reference to this subject, betrays such a want of agreement on many questions connected with the mechanism of head and shoulder delivery, that I feel some hesitancy in presenting my views on a subject which has been so often and so ably handled. Perineal support in some form or other was for a long time recommended by most obstetrical authorities; but such support was for the most part confined to the period occupied in the passage of the head, ignoring any claim the perineum might have to support during the more perilous passage of the shoulders.

Smellie advocated artificial dilatation of the outlet; Roederer, pressing the perineum in the direction of the sacrum; Puzo, stretching and lubricating the parts; Hamilton, of Edinburgh, agreed with Puzo in the use of lubricants, but further advised that the perineum be cautiously pushed back over the face and chin, when the head is being born. All of these procedures, as we shall see, differ widely from the more modern practice.

Dr. Ramsbotham says: "As soon as the head has come to press upon the external parts it becomes our duty to take our seat by the bedside, and never move from our position till the child has passed. This we do to prevent laceration." "Place your elbows," he continues, "against the bedstead, regarding it as a fixed point, and allow the perineum to be forced against your hand."

This dogmatic teaching, coming from one of the most distinguished obstetricians of his day, probably exercised a greater influence in favor of perineal support on the professional mind than did all his predecessors.

Many years ago, in a case of forceps delivery, he looked with great care after the delivery of the head, to see if any laceration had occurred, and found only a slight tear. After the passage of the shoulders he found the tear extended down to the verge of the sphincter ani. This case made an indelible impression on his mind, and from that time until the present he has never failed to make an ocular inspection, both after the passage of the head, and again after the passage of the trunk and shoulders. He is sorry to say that he can now recall vividly a number of cases in which he has found a similar result, especially in forceps delivery, for some abnormality which would have resulted in rupture without their use. For a long time he consoled himself with the thought that the unfortunate cases occurred in women in which there was a disproportion in the size of the head and shoulders, or between the vulvar outlet and the child. A larger experience, and a closer observation of the mechanism of head and shoulder deliveries, has convinced him that a large number of lacerations that occur are avoidable, with the precautions which experience has taught him are required.

Lacerations in a certain per cent. of cases, and under certain conditions are wholly unavoidable, do what we may to prevent such a result. A knowledge of this fact has probably kept back for ages, advances and improvements, especially in the way of determining the proper application of the much-needed support. That the mode of supporting the perineum for ages was faulty in the extreme, he proposes to show. He thinks a little reflection will make it plain that the earlier writers on obstetric medicine, as well as some of the present day, placed entirely too much stress on perineal support. It is equally plain that they attached too much importance to the head as a factor in effecting lacerations.

If we recall for a moment the mechanism of the delivery of the head, and compare it with the more speedy delivery of the shoulders, and reflect upon the requirements of nature, it is obvious, that so far as dilatation is concerned, that the functional activity of the physiological requirements by which dilatation is effected is much better provided during the slow stretching effected by the head than the rapid distention induced by the passage of the shoulders.

Goodell is perhaps more pronounced in his opposition to perineal support, and gives more cogent and plausible reasons therefor than anyone who has written on the subject. He considers the word "support" a misnomer as applied to the perineum, and that the head instead of the perineum needs support. He thinks that if the support ever does any good, it is by retarding the head through the interposed perineum, and that the good thus

obtained is overbalanced by the evil. He suggests that if the hand be held continually against the perineum, it becomes unyielding and incapable of equable dilatation, and the strain is thrown on the fourchette.

His instruction for supporting the head in its exit through the vulvar outlet is admirable. He holds that when the pains are abnormally strong, the passage of the head should be retarded by supporting it with two fingers in the rectum, while with the thumb of the same hand he makes the needful restraining pressure upon the head.

If with the passage of the head the danger were ended, his dicta would be perfect, but unfortunately it is not. Leishman says, "It is not by the passage of the head that the most serious lacerations are effected; they are often commenced by this, but it is the passage of the shoulder which extends the rupture."

It is singular that Goodell in his able and comprehensive description of the management of head deliveries should have overlooked the fact that the shoulders should be an object of even more solicitude on account of the greater peril to the perineal structures.

Lusk says, "In the majority of cases, the shoulders are expelled spontaneously, still it is a good plan to expedite the descent by pressure made with the left hand at the fundus of the uterus." The above sentence is so much at variance with the sound teaching of its author, as well as most other modern authorities, that I am at a loss to see how he could recommend pressure over the fundus to expedite labor, when it is so desirable that the shoulders should be allowed all the time possible to effect dilatation in the perineum now firmly contracted around the child's neck, "Unless there are symptoms of threatened asphyxia in the child," said Leishman, "or circumstances which demand immediate delivery, we would not in any way interfere in the birth of the trunk, which will be naturally effected after a short pause, generally counted by seconds."

Thus we find Leishman squarely in opposition to Lusk in his advice to expedite the descent of the trunk by pressure made with the left hand at the fundus of the uterus. It is true he says in the next sentence, "care must be taken lest the lower shoulder convert a slight tear in the perineum into an extensive laceration"—a contingency all the more likely to occur if the delivery be expedited by pressure as he directs. Then follows this most judicous counsel: "The right hand should therefore be applied to the perineum in such away as to lift the shoulders upward and at the same time furnish a bridge over which it can glide in its movement forward." Whereas Playfair, Leishman, and Lusk all recognize the serious danger encountered in the delivery of the shoulders, but none of them except Lusk make provision for tiding the perineum over the last and most serious danger of laceration during the passage of the shoulders.

During the passage of the cephalic ovoid the pressure is equally distributed over the entire surface of the vulvar outlet, so that every fiber and tissue entering into the complex anatomical structure of the perineal body is placed under contribution. And thus the highest functional activity of the organ is attained.

As soon as the head rotates on its longitudinal axis and the occupant emerges under the symphysis pubis, the chin sweeps over the floor of the pelvis with the head in extreme extension. As soon as it is delivered, flexions on its transverse axis takes place, the chin falls forward, concealing the perineum and anus, if the woman be in a dorsal position from view, and this may account for the supposition that the laceration discovered after the birth of the child occurred during the passage of the head. The perineum now rapidly and forcibly contracts around the child's neek. During the short interval of repose that follows the delivery of the head the uterus gathers itself for a final effort, which speedily culminates in a strong propulsive pain, often of sufficient strength, supplemented by the auxiliary forces, to hurl the child forcibly into the world. At this time rotation of the shoulders and restitution of the head takes place almost simultaneously. In the haste to complete delivery, every means is resorted to by some, such as compression of the fundus, and even pulling upon the neck, and hence I urge that it becomes us to keep well in mind the mechanism of labor, and restrain the delivery of the shoulders until they have adapted themselves to the long diameter of the outlet. The posterior shoulder, unsupported as it must be with the woman occupying the dorsal position, literally plows its way through the perineal body, laying it wide asunder in its passage. That perineal lacerations occur more frequently if the woman be delivered in the dorsal position than upon the side, has been abundantly proven by the statistics of Schroeder and others.

Lusk says, "During the third stage the patient's posture should be left in general to her own volition. The physician should accustom himself to conduct labor with equal

facility, no matter whether the woman lies upon her side or upon her back. The left lateral position, affected by English accoucheurs, is very convenient at the time of delivery, especially when there is occasion to support the perineum, and where, owing to the flatness of the nates, the vulva is scarcely raised, in the dorsal posture, above the level of the bedding."

Ramsbotham says, "The most convenient as well as easy posture which the patient can take, and which seems the best adapted for facilitating the descent of the head through the pelvic outlet, is the one usually chosen in this country, the left side, with the shoulder inclined forwards so that the spine may be somewhat curved, the thighs flexed upon the pelvis, and the legs bent upon the thighs. In this position, as has been before shown, the axis of the pelvic entrance is brought as nearly as can be accomplished into a line with the axis of the trunk; the muscles passing over the pelvic brim, particularly the psoas, are more perfectly relaxed than any other." Hence it follows that the obstetrician who has due regard for the integrity of the perineum, should insist upon the patient occupying this position. Rapid delivery is such a frequent source of laceration, that it should never be encouraged except in the face of an emergency requiring speedy delivery, either in the interest of the mother, or child, or both. In forceps cases all possible safe-guards should be thrown around the vulvar outlet to protect it from injury by desisting from tractile efforts during the acme of pain, and as soon as the head begins to emerge from under the symphysis the forceps should be removed and the labor left to the natural resources. The head should now be supported as hereinafter directed, and the delivery of the shoulders should be effected under such restraining influences as will insure the protection of the perineum, if possible.

He has shown that the shoulders are responsible for the major part of perineal tears, frequently by extending a slight rupture into a deep laceration, often through the sphincter ani, extending up the gut to a greater or less degree. Why is this so? A little reflection will make it apparent that there is a good and sufficient reason found in the fact that the oval shape of the head gradually effects an equable, well directed pressure upon each and every tissue forming the pelvic outlet, while each recurring pain brings into requisition some new force, until the entire structure is laid under contribution in bringing into play the highest and fullest physiological function of the perineal body. When dilatation to its fullest extent is obtained, it generally admits the passage of the head without rupturing the perineum.

Whereas, in the delivery of the trunk and shoulders the perineum is placed at the greatest possible mechanical disadvantage by the increased power which the uterus gains by its diminution in size, effected by contractility after the birth of the head; besides the perineum, immediately after the passage of the head, rapidly and forcibly contracts around the child's neck. As soon as the head is born a short pause ensues. The uterus, now reinforced by additional contractile power, gathers itself for renewed effort, which is now sufficiently powerful to overcome all resistance. Therefore, if the perineum cannot or will not stretch to make room for the body to pass, it must tear, and tear it will, unless the rapid advance of the shoulders be retarded by judicious support until the perineum relaxes, as he believes it will generally do, especially if aided by the relaxing influences of chloroform, which is both speedy and effectual in its effects.

This lesson teaches us the necessity of placing the woman on her left side, so as to give the accoucheur a better opportunity to retard the passage of the shoulders by affording the needful support to the presenting part. It is clear that the dorsal position affords no facility whatever for restraining the passage of the body when uterine contractions are sufficiently strong to overcome the resisting powers of the perineal body.

With this array of facts before us, he does not think the choice of positions—at least during the second stage of labor—is any longer a debatable question.

Then why may we not all meet on one common plane and agree upon the left side position as the ideal one to be observed in obstetric practice? If we, as practitioners of the obstetric art could agree upon this, and forever eschew the fallacious idea that the perineum needed support, and leave it to take care of itself, as nature intended it should do, we might then devote our time and skill to the support and restraining influence of judicious and timely pressure applied to the presenting part of the child until sufficient dilatation of the vulvar outlet was obtained to allow the passage of the shoulders and trunk with as little disturbance of the perineal structure as did the passage of the head.

Slowly, but surely, year by year, will these great truths, so plainly foreshadowed by Goodell, Lusk, Leishman and Playfair, be

impressed upon the minds of the medical profession. It is true that every foot of scientific advance in obstetric medicine has been contested by fallacious arguments and traditions that have for centuries been handed down from one to another. It is true that error cannot be eradicated in a day. The process must be one of gradual evolution, followed by verification.

The suggestions which I wish to make from a study of this paper are:

1. The patient should occupy the left lateral decubitis, at least during the second stage of labor.

2. Overcome rigidity of the vulvar outlet by the judicious use of chloroform.

3. The presenting part of the child should be supported, and not the perineum, during the passage of the head and shoulders.

4. Support the head by pressing it well up under the symphysis pubis, by placing the right thumb in the rectum and fingers of right hand expanded over the occiput.

5. To retard the exit of the shoulders, pressure should be applied to the trunk and shoulders by placing index and middle fingers of the left hand in the rectum, with the thumb in the vagina, to restrain its exit.

6. With the right hand restraining and supporting the head and neck by pressing well over the symphysis pubis the head and neck.

REGULATION OF HYPNOTISM IN BELGIUM.

The first land which has undertaken the legal regulation of the practice of hypnotism is Belgium. A few days ago the Legislature adopted a law which, in all probability, will serve as a model for the legislative action of other countries. It declares that any one who exhibits publicly a person hypnotized by himself or others will be punished by imprisonment ranging from two weeks to six months, and be fined from $5 to $200; that any one not in possession of a physician's diploma who hypnotizes a person under twenty years of age, or not in the full possession of his faculties, will be punished by imprisonment and fine, whether the subject be exhibited or not; and that any one who allows a hypnotized person to sign a document or other paper, whatever its nature, with the object of fraud, will be punished by imprisonment. The same penalty threatens a person who attempts to use a document signed by one while hypnotized. The people of Belgium have welcomed the adoption of the new law.

ACUTE RHEUMATISM.*

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The name "Acute Rheumatism" was first applied to this disease in 1642, but at what date the disease first make its appearance is not known. It is not my purpose, in this paper, to enter into a discussion of all the etiological factors, or the theories of blood changes occurring in acute rheumatism; neither do I hope to offer anything especially new in the study of this disease, but, I propose to outline some of the main points of interest in reference, more particularly, to the etiology, nature and treatment of acute rheumatism, as it presents itself to me, after twenty years' experience with the disease, which, to me has been the most perplexing, on account of its uncertain course, at times baffling my efforts at every point.

Much has been written concerning its character, and volumes have been devoted to its various systems of treatment, which, from time to time, have held the favor of medical writers, yet we feel that the subject is still not exhausted. Whilst we must admit that much is unsatisfactory, and new facts are continually being discovered, there yet remains a field for the active investigator to discover more for the advancement of the welfare of suffering mankind.

With this end in view I hope to be able, in this paper, to suggest some conclusions on the cause, nature and treatment of this disease which a somewhat extensive study on this subject, together with my personal experience, have developed.

Rheumatism is a constitutional disease resulting from the accumulation of excretory products in the system, and may be defined as being a specific inflammation which attacks the structures in and around the joints, more especially the larger joints, the inflammation changing from one to another, and is rarely attended with suppuration. In addition to the joint-affection, the fibro-serous structures of the heart are attacked with the inflammatory process, and is generally attended with high fever and nervous conditions, with intense pains in and around the joints.

Rheumatism is not likely to be confounded with any other disease, except pyæmia and gonorrhœal rheumatism; the former always being associated with some wound or lesion, is attended with more marked chills and the

*Read before the Union meeting of the Distric Medical Societies of Northern Ohio, Nov. 7, 1891.

perspiration is not acid. The latter disease is always associated with gonorrhœa, with a marked tendency to attack the knee joint.

As to the etiology of the disease, exposure, cold and dampness, are usually considered the principal factors in the causation of acute rheumatism. Severe muscular exertion, attended by overheating the body and followed by chilling the surface, is a frequent cause. But neither will produce rheumatism unless there is a predisposition to the disease either from hereditary or acquired taint, the former of which is said to be present in about 34 per cent. of all cases. A residence in a cold, damp climate for a long time acts as an exciting cause. Age has a strong predisposing influence, as children under 15 years of age and adults over 45 are not liable to be attacked with the disease, as statistics show that patients are more susceptible to acute rheumatism, between the ages of 15 and 30, males being more frequently attacked than females, probably due to their occupation being more exposed and more frequently engaged in severe muscular exercise. Season and climate are, no doubt, predisposing causes, it being more prevalent in a moist, cold climate.

Occupations which require great muscular effort in a warm atmosphere predispose to it, such as washer-woman, bakers, moulders and laborers generally.

The above are the principal causes which have a tendency to predispose to or excite an attack of acute rheumatism. When we come to speak of the nature of rheumatism, we must regard it as being a constitutional disease, with local inflammations, the fever not being a result of the local inflammation, but the first element in the disease, the inflammatory process being of a specific character and is the result of some poisonous material circulating in the blood, which has a strong tendency to attack the structures in and around the joints and the heart; in other words, those structures subject to severe movement and strain.

Another plausible reason for attacking the joints in preference to other parts of the body is that the special poison of rheumatism, whatever this may be, finds its principal obstruction, while circulating through the tense fibrous tissue of the joints and thus by pressure on the nerves of those parts produces the pain and disturbance characteristic of the disease.

Thus far everything appears plain and satisfactory, but we follow the investigation a little farther, and ask ourselves the question, "What is the nature of this poisonous material?" Then it is we stop and wonder why it is that, in this day and age of progression, especially in the medical profession, that we must admit that we cannot answer the question entirely satisfactorily to ourselves.

I will, however, give some of the views on this subject as given by some of our best medical writers.

In looking over our latest authors on this subject, we find there are several theories advocated, the generally accepted one being the "lactic acid theory," by Prout. Then we have the "miasm" or "malarial" idea by Maclagan, and the "germ" and "nervous" theories, and the "uric acid" theory, by Haig. Some of the arguments in favor of the lactic acid theory are as follows:

1st. Acute rheumatism is always accompanied by an excess of lactic acid in the system, and the disease never occurs without such excess, and such excess is found only in connection with it. 2d. The injection of lactic acid into the system of lower animals is followed by inflammatory changes, similar to those which occur in acute rheumatism. 3d. The administration of lactic acid to man has been followed by symptoms indistinguishable from those of acute rheumatism. The lactic acid theory of Prout, is again modified; the latest being founded upon the modern physiological teaching, that is, during muscular exercise sarco-lactic acid and acid phosphate of potassium are formed and carbon dioxide set free in the muscular tissue, and that cold acting on the surface, under such circumstances, may check the elimination of those substances and cause their accumulation in the system. This is to me the most plausible theory and explains, probably, more clearly than any other, why the muscles and their associated organs, the joints and tendons, should suffer first and chiefly; because the morbid influences are exerted upon them, when exhausted by functional activity. This would also partly account for the excess of acid elimination during the course of the disease,

The "miasmatic" theory is the one advocated by Dr. Meclagan, who assumes that acute rheumatism is caused by the entrance into the system, from without, of some miasm closely allied to but quite distinct from malaria. His arguments in favor of his theory are quite plausible and extensive, the nature of which, he admits, we have no precise knowledge of. To substantiate his theory, however, he compares the different types of malaria fever with acute rheumatism, showing that both diseases are more prevalent in low, damp localities, but that the conditions under which rheumatism was most likely to arise,

were a cold damp climate rather than a warm damp climate. Impressed with this fact and believing in the miasmatic origin of the disease, he states, in the following language, taken from his own writing: "It seems to me that a remedy for this disease was most hopefully to be looked for among those plants and trees whose favorite habitat presented conditions analogous to those under which the rheumatic miasm seemed most to prevail, and upon reflection it seemed that the plants whose haunts best corresponded to this description were those belonging to the natural order Salicacea, the various forms of willow, among this order I determined to search for a medicine for rheumatism," hence our present most effectual remedy for the treatment of this affliction, of which I will speak later.

He concludes from the above that the poison enters the system from without, and its nature was that of a miasm.

The germ theory, like the miasmatic, refers to rheumatism as being the result of a poison or germ, not generated within the system, but introduced from without; this germ, whatever kind it may be, is supposed to enter the blood, through the dilated orifices of the sweat glands, which first set up an endocarditis, then the capillary emboli thus formed produce the articular inflammation; which theory, to me, is pretty far fetched.

The nerve theory is the one advocated by J. K. Mitchell, afterwards by Hutchinson, Gull, Weir Mitchell, and Charcot. According to this theory, the exciting causes, cold and dampness, produce an impression on the surface of the body, which is conducted to the vaso-motor and trophic centres by the afferent nerves, the joints and other structures becoming affected through these systems. After thoroughly investigating this theory, we find so many lame features in it that, to me, it is not very plausible.

The "uric acid" theory by Haig is to me the latest on the subject. He argues that because acu te rheumatism is cured by the use of salicylate of sodium, which also, at the same time, produces an enormous excretion of uric acid, therefore, uric acid is the cause of rheumatism. Then again, there is no doubt whatever, but that salicylate of sodium relieves the pain, and brings down the temperature. It also causes, at the same time, a relatively large excretion of uric acid. Besides the salicylates, the only drugs that have obtained any great repute in the treatment of this disease are the alkalies, and these, again, promote a free excretion of uric acid. He shows pretty conclusively, to his own mind, at least, that a large amount of the uric acid excreted does not come from the kidney direct, but from a store in other parts of the body, as the joints or viscera.

The conclusion is that if this uric acid came from the joints its presence there was quite sufficient to account for all the pain and fever of an attack of acute rheumatism.

After making a pretty thorough investigation of this subject, I find the above to be the different theories advanced for our future consideration, and, after carefully studying these different ideas, and comparing them, we arrive at the following conclusion in reference to the nature of rheumatism: That the inflammation is the result of some special poison, generated within the system, circulating in the blood, and from our present knowledge, lactic acid appears to be the most prominent and plausible.

It has been my experience to be able, almost invariably, to trace every case of acute rheumatism as being due to prolonged muscular exercise and cooling off too suddenly, or working in a cold, damp place; and in accordance with our late physiological teaching, during such exercise sarco-lactic acid is generated in the muscles; the surface becoming chilled, this acid is not eliminated as it should or would be under other circumstances, causing it to accumulate, thus producing its specific effect in and around the joints, hereditary taint being an important factor in all cases.

When we come to speak of the treatment of acute rheumatism we should expect to find it about as unreliable and unsatisfactory, as the nature of the disease is uncertain. If the acid theory of the disease is correct, then we should be able to treat the disease on scientific principles, by prescribing alkalies; again, should the disease be due to a miasm, then the successful method of treatment would naturally suggest itself, in the remedies—quinine and the different preparations of salicin; but we find from actual experience, that neither are successful, in all cases, and that, after all, our treatment of acute rheumatism, is not scientific but empirical.

When speaking of the etiology of this disease I neglected to mention that, disturbed nutrition and errors in diet acted as important factors in the development of acute rheumatism, and should be borne in mind, when we come to speak of the treatment, which naturally divides itself into preventive and curative. Persons who are necessarily exposed to the exciting causes of rheumatism should be encourged to wear woolen next to the skin so as to prevent their bodies from chilling as

much as possible, and when there is a predisposition and a susceptibility to the disease, they should be advised to remove to a warm dry climate, with sandy soil, in a location not over-crowded with trees, exposed to sunlight and with a free circulation of air. Morning baths with tepid salt water, followed with thorough friction of the whole body, acts as a strong preventive. When heated or over-tired from severe exertion, standing about in a cool atmosphere should be avoided. I feel confident that if the above preventive measures were adhered to closely, there would be very few cases of rheumatism for us to treat. The hygienic treatment of a patient suffering from rheumatism is also very important and should demand our strict attention. When possible to do so, the patient should be placed in a large well-ventilated room, the temperature being kept constantly and regularly at from 68° to 70°; flannel or wool should be worn next to the skin, but the bed clothing should not be so heavy as to increase the perspiration. The whole body should be rubbed off frequently with a dry towel, under the clothing, to remove the excessive perspiration. Placing the patient between blankets, is, I think, a mistake, as it increases, to a marked degree, the already natural tendency to excessive perspiration, thus making the patient more susceptible to relapse. When we come to speak of the diet of rheumatic patients there appears to be a difference of opinion, some claiming that an exclusive starchy and saccharine diet will predispose to bring on attacks of acute rheumatism, and that those persons who adhere strictly to the above diet are more susceptible to the disease, and it should therefore be avoided in the early stages.

It is, however, pretty well agreed by all medical writers that a low unstimulating diet should be observed until all fever and articular inflammation have subsided, the tongue clean and the heart complication, if any, declined.

In the early stages of the disease it is not difficult as a rule, to restrict the patient to a suitable diet, as the difficulty usually is to get them to take enough nourishment, but during convalescence, and when the appetite begins to return, then it is difficult to make a patient believe that a good supply of butcher's meat will retard his progress towards recovery. But as a matter of fact, those of us who have had much experience with rheumatism know that a return to solid food, and more especially the giving of meat too soon, is most likely to be followed by a relapse, because in acute rheumatism the system is loaded with waste products, the result of imperfect assimilation and the digestive functions are seriously impaired. So long, therefore, as the symptoms are acute, small quantities of milk, with some alkaline water, such as soda or lime water, should form the main part of the diet, besides these a little beef-tea, chicken tea, or mutton broth may be added. As the temperature falls and the acute symptoms subside, vegetable soups, bread and other starchy foods may be gradually added to the list; gruels, malted-foods, arrow-root, rice, the yolk of an egg beaten up with milk, and a small quantity of brandy. As convalescence progresses, fish, oysters, and chicken may be allowed once daily. The above line of diet should be adhered to strictly until all symptoms of rheumatism have entirely disappeared.

As a rule ales, wines, and the stronger alcoholic liquids are objectionable, except where the action of the heart is feeble, or in the latter stage of the disease.

In selecting medical remedies for the treatment of acute rheumatism we should use such medicines as our experience has taught us will the most rapidly reduce the pyrexia, allay the pain, and, at the same time, most surely prevent heart complications. In my experience we have the best remedies to this end in salicylate of sodium and strophanthus, the latter being given as a heart tonic. I have selected salicylate of sodium because in it we have combined the alkaline and salicin treatment which has been the most effectual in my cases, and I believe I am safe in saying that the failures with this remedy in many cases may be attributed to not giving large enough doses. In the beginning I commence with gr. xx. doses, repeating every hour until there is decided evidence of its physiological action, and its remedial effects, the indications of which are deafness, the relief of pain and the decline in the temperature of the body, then the doses should be diminished; but this should not be done too quickly as the symptoms are apt to return. Let me state farther, that the success of this treatment depends largely on the continuation of the remedy. Some time after convalescence seems to have been established, in cases where the stomach does not tolerate the remedy I add a little lemon juice, or a mild bitter tonic, and when the stomach obstinately refuses to assimilate it, I substitute salicylic acid or salicin; the latter is most likely to be assimilated and with better effect, only that its action is slower.

If heart symptoms should arise, the salicylate must be stopped at once, and the alka-

line treatment substituted. A choice as to which alkaline remedy should be used is a matter of some importance. I think bicarbonate of sodium is the least depressing, and I often combine with it the salicylate in gr. xx. doses, or I administer it as recommended by Dr. Fuller in ʒiss doses in connection with acetate of potassium in ʒss doses, rendered effervescing at the time of administering it, by adding lemon juice or ʒss of citric acid, in about ʒiii of water which makes a rather pleasant as well as cooling drink. This I repeat every 3 or 4 hours, diminishing the dose as soon as the urine becomes alkaline; continuing this treatment until convalescence is established, in doses sufficient to keep the urine in an alkaline condition. When a cathartic is needed during the progress of the disease, I use Rochelle salts.

I neglected to mention that in the commencement of my treatment in nearly all cases, I begin by giving my favorite prescription—one tablet, containing calomel gr. ¼; pulv. ipecac gr. ½ and sodium bicarbonate gr. ii. every hour until free catharsis is produced; this followed with a light dose of Rochelle salts or a seidlitz powder. In some cases I get good results from the use of ʒi doses of effervescing bicarbonate of potassium, repeated every three hours. Salol acts well in some cases, but I have no confidence in antikammia. Acetanilid, phenacetine and antipyrine should never be administered in this disease. Opium is admissible in all cases where pain is a prominent symptom; given in sufficiently large doses to produce the desired effect. Quinine can be used to advantage in large doses, during the acute stage, especially in malarial districts, and in tonic doses, during the whole time of convalescence. In endemic cases, tincture of iron in large and repeated doses will be attended with good results. Numerous other remedies might be mentioned, but the above is about the line of treatment I have adopted in my practice, and I must say it has been highly gratifying, as I have had but one case of heart complication in all my experience.

Before closing this paper I cannot refrain from giving my experience with the local application of cold in the treatment of this disease, which has not been very extensive, but entirely satisfactory to myself, and very grateful to my patients.

Up to eighteen months ago I used various kinds of liniments, hot applications, wrapping the joints in cotton batting, etc., and, I think, not without some benefit, but since I have used cold applications to the joints I could wish for nothing better, as the almost immediate relief it affords the patient is something wonderful, but you will find that its application requires considerable courage, however, on the part of the physician to use it in the face of the criticism it brings forth from all the old women in the neighborhood, as it is entirely out of the line of the usual way of treating this disease, but I assure you that you will not be disappointed in its use if thoroughly applied, which may best be done by wringing heavy towels out of cold, or even ice, water and wrapping the joints; this may be covered with flannel and changed as often as necessary to keep the part cool. It is important that it should be continuously applied, until all the symptoms of the disease have disappeared. I do not wish to be understood that I claim any originality in the use of cold in the treatment of acute rheumatism, as Drs. Senator, Esmarch, and Stromeyer used it years ago, but I was induced to use it because I have seen its good effects in combating inflammations in other parts of the body, and could see no reason why it should not act in the same way in inflammation of the joints as a result of rheumatic poison.

I would be pleased to have the experience of other physicians on this subject.

(I)—SARCOMA OF THE KIDNEY; (II)—MULTIPLE ABSCESSES OF THE LIVER.*

By J. B. HERRICK, M. D.,
CHICAGO, ILL.

About a year ago a gentleman in apparently good health, aged 65, came under the care of Dr. Charles Warrington Earle for the sudden appearance of blood in the urine. He was put to bed by the doctor, and seemingly recovered after three or four days, the blood completely disappearing.

There was at this time no temperature, no pain, merely the appearance of blood in the urine. At the end of about a week after the apparent recovery, he was up and around, and a week later, that is two weeks from the first appearance of hæmaturia, Dr. Earle was again called to see him because of a recurrence of the previous trouble. There was a larger amount of blood than there had been at first, and the patient complained of some pain in the left lumbar region. He was again

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*Read before Chicago Pathological Society, Oct. 1891.

put to bed, placed upon ergot and tannic acid; but the hæmaturia still continued, Catheterization was necessary because of the clotting of the blood in the bladder. This catheterization, somewhat to our astonishment, had to be frequently performed; at first, every six or eight hours; later, every two or three hours, and finally even every hour. Towards the last, catheterization was performed by an intelligent medical student. Symptoms of cystitis appeared some time be the patient's death; vesical tenesmus, the appearance of mucus in the urine, together with tenderness and pain in the region of the bladder, and a slight temperature, 99° F. to 102° F. All these symptoms gave evidence of cystitis, and possibly of a slight form of sepsis from the cystitis. The patient gradually became weaker and weaker, and, after an illness of about ten weeks, died. The autopsy findings that were of interest were the following:

The right kidney showed merely the changes of chronic interstitial nephritis or contracted kidney. This kidney, which I hold in my hand, you see is diminished in size; the capsule is adherent in places, the cut surface shows the diminished cortex, with characteristic cysts scattered here and there throughout the kidney. One of these cysts is still unopened. This finding is, perhaps, of no interest, except from this fact, that had operative procedures been instituted in this case, and the left kidney, the one containing the sarcoma, been removed, it is probable that death would have ensued, for this contracted kidney could not do the work of two perfect organs. The left kidney was much enlarged; there was a subcapsular and also a perinephritic hæmorrhage. The upper portion of the kidney was occupied by the new growth. Several microscopists have taken sections from this specimen, so that there is little left of the new growth, yet enough remains to show by the difference in color, feel, and contour, the outlines of the tumor. This on microscopical examination—the examination being made by Dr. Hektoen—was proven to be a sarcoma.*

A third finding of interest, and especially from the light that was thrown on the history of the case by Dr. Earle, was the condition of the gall-bladder, though this has nothing at all to do, so far as can be judged, with the late history of the case. The gall-bladder was small, shrunken or atrophied, contained no bile, had no outlet, the cystic duct being represented by a strip of fibrous tissue. The walls of the gall-bladder were tough and leathery to the feel, and appeared to the naked eye to contain a large amount of fibrous tissue. The gall-bladder contained about thirty gall-stones of varying sizes and shapes, as can be seen in this specimen. There had evidently been a previous cholecystitis where adhesive inflammation had taken place in the cystic duct, resulting in its perfect occlusion and consequent atrophy of the gall-bladder. The moment we found this condition, Dr. Earle said that about ten years before, the patient consulted him for what he regarded as a stomach trouble. It had baffled the skill of several physicians, and the patient made weekly pilgrimages from the South Side to Dr. Earle to receive the treatment that he had instituted. There was quite severe, vague, indefinite pain in the region of the stomach, which gradually disappeared. The disappearance of the pain of course was due to the abatement of the inflammation, the closure of the duct, and the gradual atrophy of the gall-bladder.

A fourth finding, which we came near overlooking, is this: I had almost forgotten to make an incision into the urinary bladder. Drs. Earle and Hoadley had left the room, and there was no one there but the medical student, the son of the dead man, and myself. I cut into the bladder, and the medical student with difficulty suppressed an exclamation of surprise as I lifted this—a broken half of a catheter—into view. And now the question arose, Who introduced this catheter? Dr. Earle knows that he did not; I was absolutely certain that I had not done it, and the medical student said he was innocent. There were then but two persons left who could have done it, the dead man and his daughter. The daughter remarked to us at one time that she thought it was not necessary for a doctor to come over in the night to introduce the catheter, that she could do it and thus save the extra expense if we would allow her to do so. She, perhaps, passed some old catheter, which broke off, and never reported the circumstance to us. This accounted, possibly, for the cystitis from which the patient suffered; also for the tenesmus of which he complained, and for the frequency with which we had to catheterize. The son who stood right there never had the slightest suspicion of anything unusual in the post-mortem findings of the case.

The interest in this case is enhanced by the fact that no other sarcomatous foci were found in chest or abdomen, the sarcoma being apparently primary, a condition of rarity. The cranium was not opened.

*Sections examined by Drs. A. E. Hoadley and G. H. Weaver were pronounced sarcomatous.

MULTIPLE ABSCESSES OF THE LIVER.

This patient came under my care in the Presbyterian Hospital about two months ago. The patient was a married woman of 23 years of age. The brief history showed that she had enjoyed excellent health up to one year prior to her entrance into the hospital, barring one exception, at the age of 12 she suffered from what seemed to be a simple attack of ordinary jaundice. Twelve months before entering the hospital she was taken with a pain in the right hypochondriac region, and was obliged to call in a physician. He suspected the passage of gall-stones, and directed the examination of the stools. No stones were detected. Again, at three different times she was compelled to call in a physician for a recurrence of these severe attacks of pain in the right hypochondriac region. Morphia was required in every instance, the pain lasting from a few hours to one or two days. Jaundice never followed any of these attacks. One week before coming from Wisconsin to enter the hospital, she went to bed one night in perfect health and was suddenly seized with severe pain at one o'clock in the morning. It was thought to be a recurrence of the old attacks of pain in the right side. Morphia was required in this instance, but the pain did not leave as it had previously done. It continued for two or three days, then jaundice began to appear. This alarmed the patient, especially as a slight temperature began to develop. The friends hurried her off to Chicago that she might seek aid there. Upon admission to the hospital, a diagnosis of gall stones with impaction was made, and the question of surgical interference at once came up. After two days' delay, until the patient's friends had arrived from Wisconsin, it was decided not to operate. The case was seen by Drs. Stehman, Graham and Senn, and it was deemed inadvisable to operate because of the low condition of the patient, and the wide diffusion of the inflammation, apparently septic, in so many organs. Tenderness over the upper abdomen with tympany indicated a quite extensive peritonitis. The physical signs, rapid breathing, etc., gave evidence of consolidation of the lower lobe of the right lung, and the anterior portion of the lower lobe of the left. Moreover an endocardial murmur at the mitral valve had developed, and the temperature ranged from 102° F. to 104° F. It seemed certain death on the table if we resorted to an operation. The patient lived much longer than any one expected. For over two weeks her temperature was of an irregular character, often higher in the morning than in the evening. There were sweats but no marked chills. Death occurred about two weeks after admission to the hospital.

The post mortem was made the same afternoon, and the findings in the case showed in the common duct, a solitary smooth, oval gall-stone about the size of a small pigeon's egg. This was situated so as to nearly close the outlet of the duct into the duodenum. This gall-stone lay directly opposite an abnormal opening in the duodenum, which was not large enough to admit of the passage of the gall-stone.

Adhesions had taken place between the duodenum and the common duct; by pressure, atrophy, or ulcerative process there had been formed this new communication between the duct and the intestine. It is probably that had life continued the opening would have grown large enough so that the gall-stone would have dropped into the duodenum, and in this way appeared in the stools. Not only were there adhesions between the duodenum and the common duct, but the peritonitis had resulted in adhesions between the stomach, diaphragm, liver, omentum, and intestinal coils in the upper half of the abdomen. Through this new opening, which existed between the common duct and the duodenum, it is probable infection took place —certainly infection had taken place in some way, for there existed a suppurative cholecystitis, a suppurative cholangitis, multiple abscesses of the liver. The liver on section seemed to be riddled with small abscesses of various sizes. Two, the largest, were the size of a walnut. These were filled with bile-stained pus. In the lower lobe of the right lung there was found consolidation, the appearances of pneumonia in stage of resolution, as also in the lower lobe of the left lung in its anterior and internal portions. These points of consolidation were exactly opposite the adhesions between the lung and the diaphragm, and the diaphragm and the liver. Changes characteristic of recent vegetative endocarditis were found on the mitral and aortic valves.

This case is of interest from an etiological standpoint. An abscess of the liver is rarely primary, save in those cases originating in traumatism. A punctured wound may give entrance to the infective agents; a severe contusion, or a punctured wound from a fractured rib may furnish a point of least resistance where localization of the pus microbes will excite suppuration.

Secondary abscesses may originate in suppurative disease in a neighboring organ.

Purulent pleuritis, or pericarditis; the perforation of a gastric or duodenal ulcer, where adhesion between the stomach or duodenum and the liver had existed, may be the starting point of an hepatic abscess. Metastatic abscesses in the liver often occur, the primary focus being distant. The commonest cause is suppuration in the abdominal organs, whose veins go to make up the portal vein. A dysenteric ulcer, with suppuration, may cause thrombo-phlebitis in one of the radicals of the portal vein. A fragment of the thrombus is detached. When this, being septic, lodges in the liver, it excites suppuration, and hepatic abscesses is the result. This is notably the case in the so-called tropical abscesses, In our temperate climates, however, gall-stones furnish the commonest cause of abscesses, at least of multiple abscesses. Constant irritation of the walls of the gall-bladder and of the ducts, and close proximity to the septic intestinal tract, with which there is direct communication by the avenue of the common duct, and at times, as in this case, by a patent new opening formed by ulceration, give the conditions favorable for suppurative inflammation of the gall bladder, and of the gall ducts. And if the inflammation extends into the intra-hepatic bile ducts, then the parenchyma is almost sure to become the seat of a suppurative inflammation.

I regret that I was unable to bring away from the case any specimens excepting the solitary gall-stone, which is an ordinary-looking one, and a small piece of the liver for microscopic section. The brother stood by and positively refused to allow anything more than that to be taken.

Dr. Charles Warrington Earle: The history of the case, as narrated by Dr. Herrick, together with the exhibition of the specimen, is, to me, exceedingly interesting, because I have followed the case for six or eight years. The patient was 65 or 70 years of age, and lived on Fulton street when I first saw him. At that time he was a well-nourished man, which was still true when he took his bed in his last illness. There has never been a symptom in his entire history that pointed to a malignant disease. He certainly had no cachexia; on the contrary, he was rather ruddy, and his nutrition good, for a man of his age. He enjoyed life remarkably well, and, with the exception of occasionally an attack of pain in the vicinity of his stomach, or what afterward proved to be his gall bladder, had little cause to consult a physician. I do not now remember the complaint from which he was suffering when I first saw him; but for the pain in his stomach, a prescription consisting of muriatic acid, a little pepsin, and pancreatine gave great comfort, and this combination was given many times. I find, upon looking in one of my case-books, that at one time in his history I prescribed cimicifuga and salicylate of soda. It has occurred to me that it is just possible he may have had symptoms of lumbago, although I cannot now remember. If he ever had even a backache, or anything which pointed to malignant disease, I fail to remember it, and also neglected to make any record of it. He was extremely well nourished at the commencement of what proved to be his last sickness, and only took to his bed after repeated hæmorrhages from the urinary tract, and its consequent exhaustion. There was no supposition, even at this time, that there was malignant disease. I believe malignant disease of the kidneys was excluded, largely on account of his good nutrition and lack of cachexia. His principal symptoms were profuse hæmorrhage from the urinary tract, gradual prostration, failure of his strength, terrible vesical tenesmus, and finally more or less collapse and death.

I think we were all surprised when we found sarcoma in the kidney, and more especially were we surprised when we found a catheter in his bladder. As Dr. Herrick has said, he did not introduce it, and I am sure I did not.

LAPAROTOMY UNDER LOCAL ANÆSTHESIA.

Schleich (*Berliner klin. Wochenschrift*, No. 35, 1891), reports three cases in which he performed laparotomy, after inducing local anæsthesia with ether and cocaine. The patient first inhaled only sufficient chloroform to render her partially unconscious. The abdomen was then sprayed with ether until the skin was rendered insensitive. Between forty and fifty superficial and deep injections of a weak solution of cocaine (three-fourths of one per cent.) were then made along the line of the proposed incision, no more than a grain of the alkaloid being used. In order to increase the action of the drug the extremities were encircled with Esmarch's bandages. In the operations described (two ovariotomies and a gastrostomy) the patients were entirely conscious throughout the operation, and stated that the pain was slight, even when peritoneal adhesions were separated. They had no unpleasant symptoms, and made a good recovery. The method is recommended in cases in which ether and chloroform are contra-indicated.—*Amer. Jour. Med. Sci.*

SELECTED FORMULÆ.

TONSILLITIS, RAPID CURE.

℞ Tinct. verat vir. (*Norwood*).....30 drops.
Morp. sulph.....½ grain.
Aq. dest.....9 drams.
M. Sig. Teaspoonful every hour for two hours, and then every two hours as n eded.

—*Med. Rec.*

SCROFULA.

Iodine and iodoform give better results than the alkaline iodides. To young children tincture of iodine may be given, one drop daily in a little thin porridge made of farina and milk. Besnier prefers the use of iodoform, which may be given continuously for a long time. He prescribes it after the following formula:

℞ Iodoformi .....gr. iss.
Mellis.....℥ iv.
M. Sig. One or two teaspoonfuls to be taken.

—*Le Bulletin Médical.*

FALLING OUT OF THE HAIR.

The following is recommended (*O Galenos*, Etos 1, Arithmos 9) in falling out of the hair:

℞ Quiniæ sulphat..... ℥ j.
s lve in
Acid sulphuric., q. s.
adde
Aquæ communis.....fl. ℥ viij.
Aquæ melissæ.....fl ℥ j.
Boraci venetic..... ʒ ij.
Apply to the scalp two or three times a day.

PHOSPHORUS IN RICKETS.

Nettenheimer, according to *Les Nouveaux Remedes*, proposes a new formula to replace that of Kassowitz, who is well known as an expert in such matters, and whose formula is as follows:

℞ Phosphori.....gr 3-20.
Olei amygdal.....℥ xxv.
M. Sig. A teaspoonful to be taken once daily.

Nettenheimer recommends the following as superior:

℞ Phosphori.....gr. 3-20.
Ol. amygdal. dulc.....5 vijss.
Pulv. sacchari alb.,
Pulv. gum arab.....ää ℥ ivs .
Aquæ dest llat.....℥ ij.
M. Sig. A teaspoonful at a dose.

ECZEMA OF THE VULVA.

Dr. Lusch (*L'Union Médicale du Canada*, No. 9, 1891) speaks highly of the following:

℞ Sodii bicarbonat.....grammes 4.
Potassii bicarbonat..... " 2.
Glycerin neutr..... " 3
Tinct opii..... " 4.
Aquæ..... " 175.
Apply locally, and then dust on—
℞ Amyl. pulverizat..... " 98.
Camphor pulverizat..... " 2.

ACUTE ECZEMA.

Dr. Alexinski (*La Semaine Médicale; L'Union Médicale du Canada*, No. 9, 1891) uses the following:

℞ Zinci oxydat.....grains xv.
Bismuthi subnitrat..... " xxx
Amyl. pulverizat.....℥ jss.
Lycopodii pulverizat.....℥ jss.
Dust in on the parts affected nights and mornings.

SALOL AS A COATING FOR PILLS.

In consequence of the fact that Salol is not dissolved in the stomach, but is only attacked by the pancreatic juice after it reaches the intestine, Dr. Ceppi suggested its use for coating pills intended not to act *before they enter the intestines*. Dr. Yvon publishes (*Union Pharmaceutique*) the following formula for the purpose in question:

Salol.....grammes 2.
Tannin..... " 0.5.
Ether..... " 10.

With this solution the pills are varnished several times, until the protecting layer is sufficiently thick. The entire operation—Dr. Yvon states—does not occupy more time than is required in varnishing wiih Tolu Balsam.

TREATMENT OF FAVUS.

Dr. Kerley (*La Semaine Médicale*, No. 53, 1891), in the treatment of favus, employs the following:

1. ℞ Hydrarg. corrosiv.....centigrammse 12.
Alcohol, q s.,
Petrolei, } .....ää grammes 15.
Ol. olivar, }

2. ℞ Alcohol absolut.....grammes 30.
Iod. pur., q. s. to obtain a saturated solution.
For external use.

Sponge and rub the favus spots and the adjacent surrounding skin one day with the first solution and the next with the iodine solution. Continue until a slight irritation of the skin supervenes, then interrupt the treatment a few days and apply an indifferent salve, when the treatment may be recommenced

The writer asserts that a case of favus may thus be cured, on an average, in six and a half weeks.

BLOOD POISONING.

℞ Eucalyptol (Sander)..... ½ ounce
Syrup simplex.....1½ ounces.
Aqua.....2 "
One teaspoonful every one or two hours.

CHOREA.

Benedikt recommends the following treatment:

℞ Fowler's solution .....2 to 3 parts
Distilled water.....222 parts.
Simple syrup..... 30 "
M. Sig. Tablespoonful three times a day.

If there exist articular pains, give sodium salicylate for some days. Apply the continuous current along the vertebral column. Avoid narcotics, particularly hydrate of chloral. Desnos has used exalgine with marked success.—*Medical Abstract, June, 1891.*

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LEADING ARTICLE.

ELECTROTHERAPY.

So much has been said recently in medical literature on the subject of electrotherapy, and so vast is the amount of conflicting evidence brought to light by able exponents of both sides of the question, that the subject is one that should be approached with caution.

Foremost among the most recent dissertations on this subject is the article contributed to the *Progrès Médical* in one of its recent numbers, and which has also been discussed in other French medical journals, notably the *Revue Médicale.*

The writer of the article alluded to, Dr. Vigouroux, deals with the subject broadly and succinctly, basing his conclusions both on extended personal observation and a careful review of the experience of others. He refers to the three principal methods for the application of electricity: *Faradism, galvanism,* and *static* electricity or *franklinism.*

Faradism consists in the employment of an induction current, viz., an interrupted current; galvanism of a continued current; and static electricity or franklinism, of a current produced by the so-called electric machines of Ramsden, Holtz, Carré, Winshurt, etc., by which the electricity is generated through friction.

There are important differences in these three methods of applying electricity. In the first two generally but a part of the body of the patient is placed in the circuit between the two poles, while in franklinism, the patient being isolated from the ground, represents a continuation of one pole of the machine, the current being diffused through the entire body. In consequence, faradism and galvanism are essentially applicable for local medication, while franklinism may be found more useful in general medication, but has also a field of usefulness in local use.

Another fundamental point of difference between these three forms of electricity lies in the potential quantity (tension) of each. In this relation we find galvanism and franklinism radically different from each other. The

potential quantity of electricity in galvanism is never above a voltage of 50 or 60, while in franklinism it is very high, ranging from 100,000 to 150,000. The strength of the current is in inverse proportion to the voltage; thus, in franklinism an extremely high voltage produces a weak current, while in galvanism a very low voltage produces a far more powerful current, this being occasioned by an increased amperage. In consequence, while the static current does not exert any pronounced chemical or magnetic action, its mechanical action is very marked; and, on the contrary, the chemical and magnetic actions of the galvanic current are relatively more intense. The induction or faradic current occupies a place between these two.

Therapeutically, the galvanic current will be found to produce, locally, chemical, physiological, and mechanical actions.

Regarding the chemical effects, these consist of supposed chemical decompositions in the fluids of the body, termed *electrolysis.* The bases and hydrogen approach the negative pole, while the acids and oxygen are attracted to the positive pole. Vigouroux, however, very positively asserts that under ordinary circumstances, chemical or electrolytic actions are not observable. The mechanical effects consist in a displacement of liquids in the course of the current.

It is the physiological action that is most important, and this is manifest in the phenomena of excitation. All organs and excitable structures react in some form according to their specific properties, such reaction continuing as long as the electric current is applied. In order to obtain these results it is necessary that the current is interrupted with sufficient frequency.

The difference of the actions of electricity at the two poles is very noticeable. At the negative pole we find an afflux of liquids, hyperæmia owing to dilation of the blood vessels, and an increased excitability of the nerves. At the positive pole the conditions are directly opposite: anæmia caused by contraction of the arterioles, reflux of liquids, and a diminution of the excitability of the nerves.

Practically, therefore, the physiological actions of the two poles are in opposition to each other; the negative pole congests and excites, while the positive pole depletes and depresses.

Apart from these, electricity exerts a general action, which is commonly partially or entirely overlooked, and which consists principally in an increased activity of calorification and respiration, and, finally, in a sensation of well-being—euphoresis—indicating a widespread action on nutritive processes.

This general action, while almost *nil* in galvanism, is more marked in faradism, and reaches its maximum in franklinism.

The electrical current should, in all cases, be applied by the physician himself, and for this purpose it is by no means essential that he should be a specialist.

Regarding the therapeutic application of electricity, Dr. Vigouroux has limited himself exclusively to the nervous system. While a detailed account of his experiments would prove interesting reading, we are forced to content ourselves with a brief recapitulation of his results.

There is nothing to prove that when electricity is applied to the head in the ordinary manner, this organ is in any way affected by the current. The various phenomena that are apparent during the application of the current, such as a metallic taste, ringing in the ears, and vertigo are all explainable by an excitation of the nerves of sense, or other indirect actions. The only possible way in which the brain might be influenced is through a reflex action.

In diseases of the medulla, the author found that this organ, like the brain, was unaffected by electricity.

In neuroses, in the treatment of hysteria and neurasthenia, the principal treatment is to improve general nutrition; for if we treat these conditions locally, by electricity, we are more apt to set up a condition worse than that of the original malady. In children, for instance, hysteria is often manifested in the form of contractions, etc.

In children the general treatment of these neuroses should consist in franklinism, to the

entire exclusion of hydrotherapy, but coupled with cautious internal medication.

In chorea in children, especially the type which is frequently followed by relapses, franklinism will frequently be found most useful.

In "tics," true "tic" is incurable by electricity, as well as by other means. Pseudo or false "tic" is easily conquered by franklinism.

In progressive myopathies, atrophic or pseudo-hypertrophic, electricity is only valuable as a means for diagnosis.

In muscular atrophy, consecutive to arthritis, viz., simply atrophy (resulting in long immobilization of a limb consequent to a fracture or some other injury) and amytrophic spasmodic paralysis. The treatment should consist of franklinism, applied both generally and locally, to the affected muscles.

Good results are seldom attainable in atrophic paralysis. Most frequently the application of the current is entirely ineffectual.

In infantile paralysis, multiple neuritis, or acute polyneuritis, little is to be gained by electricity.

In the local treatment of the majority of peripherical paralyses electricity is certainly useless, and often absolutely harmful.

In conclusion, Dr. Vigouroux is of the opinion that electricity is entitled to a prominent place in therapeutics, but that its use should always be undertaken with caution.

SALT LAKE MEDICAL SOCIETY.

The annual meeting of the Salt Lake Medical Society was held in the Chamber of Commerce Hall. There was a large attendance of the members.

The following officers were elected: Dr. G. W. Foster, president; Dr. S. Ewing, vice-president; Dr. E. F. Root, recording secretary; Dr. J. C. E. King, corresponding secretary; Dr. J. J. MacAckran, treasurer; and Dr. Union Worthington, librarian.

The treasurer reported that there was $168 in the treasury.

Other reports which were read showed that there was an enrollment of fifty-two members and that new members are constantly being received.

BOOK REVIEWS.

SAUNDERS' QUESTION COMPENDS, No. 23. ESSENTIALS OF MEDICAL ELECTRICITY by D. D. Stewart, M. D., Demonstrator of Diseases of the Nervous System and Chief of the Neurological Clinic, in the Jefferson Medical College; Physician to St. Mary's Hospital, etc.; and E. S. Lawrence, M. D., Chief of Electrical Clinic and Assistant Demonstrator of Diseases of the Nervous System in the Jefferson Medical College; Physician to Dispensary of St. Christopher's Hospital for Children, etc. Cloth, with 65 illustrations. Price, $1.00.

This number of the series of compends recently issued by this publishing house is certainly one of the most useful, and treats of a subject which is generally much neglected in the education of medical students. It will undoubtedly prove a practical help to the practitioner also, and its size will render it a valuable addition to any doctor's library, containing as it does, much practical knowledge of a wide subject in a very small compass. During the last few years the tendency has been to print too many of these quiz-books, but the present one should fill a "long felt want" because it presents in a readable form a concise synopsis of a subject not often treated in this class of works. We take pleasure in recommending it to the profession generally, and to the student in particular.

THE RATIONAL CURE OF DEAFNESS AND DISCHARGES FROM THE EAR. The Modern Treatment for the Radical Cure of Deafness, Otorrhœa, Noises in the Head, Vertigo, and Distress in the Ear. By Samuel Sexton, M. D., author of "The Ear and its Diseases," etc., etc.; Assisted by Alexander Duane, M. D., New York: J. H. Vail & Co., 1891.

The reputation of the chief author of this communication upon the radical cure of deafness and discharge from the ear is sufficient proof that it will receive a wide reading at the hands of the profession. Apart from this fact, however, the subject dealt with is an extremely important one, and the clinical experience which is detailed in the book adds greatly to its force. It consists of a reference to the old operation for relief of these troubles, with remarks upon the reasons why it failed to be of permanent benefit, and followed by a clear and concise description of the operation as practiced by Dr. Sexton, succeeded by a consideration of the indications for the operation. The authors contend that in all cases of chronic catarrh of the middle ear, attended by deafness, unpleasant noises, etc., it has proven in their hands a permanently curative procedure; and they detail cases illustrating its good results. The

subject matter of the book is chiefly taken from former papers by Dr. Sexton, while many details regarding indications for treatment and operation are wholly new. It is an attractive little book, exceedingly well written, printed in very readable type, and combines in a few words the essential points of an extremely important subject.

LITERARY NOTES.

A pathetic interest attaches to the volume of *Lyrics*, by Cora Fabbri, about to be published by Harper & Brothers. The very spirit of youth and love and spring breathes through these sweet verses, which have a dainty finish and grace worthy the muse of Italy. It is difficult to think of their author as out of this bright world, but, alas! Cora Fabbri died at San Remo, on January 12th. An advance copy of her poems was sent to her early enough, it is to be hoped, to have given her a passing pleasure.

A STUDY OF THE MYSTERIES OF LIFE.

In a world where it is very desirable to be entertained, and not always easy to find entertainment, there is a great deal to be got out of a discreet consideration of the mysteries of life. They give one something to theorize about in odd moments, and to have theories about them gives one an interest in whole series and classes of facts which seem to fit in with such theories or to upset them. If the facts won't fit the theory, then there is the theory to change; and to have one's theory driven into a new shape is the next best thing having it justified.

There was a little tale in the newspaper the other day about Mr. Edison, that he held up his finger and bent it, and asked, "What does that?" Failing to get a satisfactory reply, he said he was trying to find out what is the force that pulls the strings that make animate creatures move. That is one of the great mysteries—the mystery of motion. It is that, we are told, that Mr. Keely, the motor-man, has been brooding over for several decades past. Mr. Keely's experience has not been such as to encourage any poor men theorize on this subject for a living; nevertheless, it is a great subject for a mind to dwell upon in its leisure moments. Sir Isaac was thinking about it when the apple fell and gave him an idea that was of value to him, and has been useful ever since. There is always this advantage about having one's mind run on something in particular, that even if it does not bring down what it is aimed at, it is more likely to hit something else that is worth while than if it was wandering aimlessly.—From "The Point of View," in February *Scribner*.

THE complete novel in *Lippincott's Magazine* for February, "Roy the Royalist," is by Mr. William Westall, and is a stirring tale of adventure in the wars of Napoleon. Though its events date back nearly a century, they are presented in the brisk and business-like modern manner. The hero, a dashing young officer of the British navy, prompt and capable alike in friendship, love, and war, meets Bonaparte while a prisoner in France, distinguishes himself in the defence of Acre, recovers a treasure concealed in a château of the Jura by its *ci-devant* owners, and finally settles in his native Virginia.

PERISCOPE.

THERAPEUTICS.

TREATMENT OF HEADACHE OF GASTRIC ORIGIN.

Dr. Westphalen (*Berlin klin Wochenschr.*, No. 37, 1891,) discusses headache of gastric origin. He refers at the outset of two cases observed by him in connection with Dr. Moritz, and published by the latter. Although these patients did not suffer from headache, but were the subjects of obstinate intermittent fever, combined with skin eruptions resembling erythema nodosum, their cases are included in the present paper because Dr. Westphalen is of opinion that such symptoms are of gastric origin; that, in fact, toxic substances present in the stomach under certain circumstances are capable of producing, after absorption, various skin eruptions and disturbances of temperature on the one hand, and, on the other, disturbances of circulation in the central nervous system and its associated parts, a consequence of which is headache. In the two cases referred to attention was drawn to the stomach by slight dyspeptic trouble. The conclusions having been come to that the general disturbance was due to absorption of toxic material from the stomach, an indication presented itself in the fact that, in one of these cases, there was complete absence of hydrochloric acid from the contents of the stomach. The acid was prescribed in both cases; the fever and skin eruption disappeared, and the patient completely recovered. The author explains the success of the drug on the theory that the ptomaines or toxines of micro-organisms are

capable of exerting their detrimental influences only when there is a deficiency in the amount of free mineral acid in the stomach. The antiparasitic action of the normal gastric juice may be taken as proved in the case of certain species of bacteria at any rate. To the two cases first reported three others are now added. In one the skin affection present was erythema exudativum multiforme, in the other two urticaria. All were cured by hydrochloric acid. In one of the urticaria cases the outbreak was apparently prevented by this drug. The patient who suffered regularly from urticaria, accompanied by giddiness and a feeling of congestion in the head after eating strawberries, was induced to eat a quantity of them, and to take twenty drops of dilute hydrochloric acid fifteen minutes afterwards. The symptoms failed to appear.

The author next gives details of four cases of unilaterial headache associated with dyspepsia and following upon errors of diet. The patients had taken many drugs, such as antipyrin, antifebrin, caffein, phenacetin, without benefit; muriatic acid caused the headache rapidly to disappear. Further treatment consisted in the regular administration of the acid in association with mineral waters, and attention to the diet. Three of the patients recovered, whilst the fourth was materially benefited. In two of these cases also the headache was apparently prevented by the administration of the acid directly after the patient had eaten freely of some article the ingestion of which had hitherto been invariably followed by headache. Whilst believing that in very many cases the symptoms (headache, skin eruptions, fever), may with much probability be referred to the action of some poisonous product of bacteria, Westphalen remarks that in certain cases the nature of the noxious substance is obscure, as, for example, in those in which the symptoms mentioned follow the ingestion of such articles as chocolate and strawberries. But in the last class of case, also, muriatic acid is efficacious.—*Brit. Med. Jour.*

TREATMENT OF OZÆNA.

Dr. Demme states in the *Deutche Medicinische Wochenschrift* that he had found massage of the nasal fossæ the best treatment for ozæna, and one followed by good results in a very short time. The object is to produce a hyperæmia which is of an acute character, it having been observed that ozæna is frequently cured by a new acute rhinitis. The method of procedure is as follows: A metal sound has a wad of cotton wrapped around it at its extremity, the wad being about as hard as the pulp of the finger. A 20 per cent. pyoktanin lanolin ointment is employed. The movement consists of light, short, even strokes which resemble effleurage. This sitting should be of daily occurrence and last not more than one-half minute for each fossa. In many cases two sittings a week are sufficient. One pre-requisite is absolute cleanliness in the operation. The touch dispenses with the necessity of using a mirror, and in some of the more intelligent patients the author found that they could perform the massage themselves. He claims that a cure is effected in a few weeks.

PILOCARPINE FOR DRYNESS OF THE TONGUE.

Gelatine capsules containing from .003 to .006 grm. of pilocarpine are recommended to relieve dryness of the tongue. One of them is permitted to desolve on the tongue previously wetted with water. This causes a free flow of saliva for twenty-four hours, while it never produces any diaphoresis.—*Jour. Med. Par Revue Int. Bib.*

THE TREATMENT OF SCROFULODERMA AND LUPUS.

Dr. Brooke has somewhat modified the method of treating lupus by an ointment of oleate of mercury, salicylic acid, and ichthyol, which he published a year since. Finding in some cases the original formula too strong, he has reduced it, combined it with Lassar's paste, at the same time adding sufficient red Armenian bole and raw umber to match the color of the skin.

℞

Zinci oxidi, Amyli pulv.	āā ¼ oz.
Vaselini albi	½ oz.
Hyd. oleatis, 5 per cent.	1 oz.
Acidi salicylici	gr. xx
Ichthyolis	℥ xx
Ol. lavendulæ	q. suff

M. fiat ung. coloratum.

This, when well rubbed in and then covered with potato-starch powder, completely disguises the disease, and attracts very little attention. He sometimes diminishes the salicylic acid and increases the ichthyol. The action is most rapid in cases of scrofulodermic tumors and ulcerations, but is also pronounced in those in which lupus has developed from the scrofulodermic basis. In pure lupus the effect is distinctly weaker, especially in those where there is much sclerosis or old scarring.—*British Journal of Dermatology*, December, 1891.

CHRONIC DIARRHŒA.

Dr. Alexejewski (*Deutsche Medizinal Zeitung*, July 2, 1891) has found the flowers of the red rose to have long been held in high repute amongst the Russian peasantry as a remedy in chronic diarrhœa. He uses an infusion made with a handful of the dried flowers. Children up to five years may take during the course of a day a cupful.

A CASE OF IODISM.

A case came under my observation a few days ago which so well illustrates the ease with which an error is committed in a syphilitic subject that I cannot forego reporting it. I was in the act of leaving St. Mary's Hospital, having completed my visits to patients, when I was asked to see a young man in the waiting room who had applied for admission. I found a youth of about 20, well nourished, and of good muscular development. His appearance was that of health, except that his color was rather dusky, his eyelids puffy, the conjectivæ injected, and there was some swelling of the right orbital region. There were also a half dozen cicatrices on the face, one of them on the chin, another on the side of the nose, a third involving the eyebrow, each of them a half inch in diameter, flat and white. The patient complained that he had suffered for a month from a frontal headache, gradually increasing in severity, of the swollen condition of his face, and of some tenderness of the frontal bone. Weakness was the only other symptom complained of, and this, the patient alleged, caused him to quit work and come to the hospital. He admitted having had a "bad case" of syphilis one year ago. There was no perceptible coryza. Without further examination, I recommended him for admission, and asked that he be given fifteen-grain doses of potassium iodide until I made my next visit.

Next morning I approached my patient in full anticipation that I would find in him an interesting case, some freak of constitutional syphilis, which would rapidly fade away under heroic doses of the iodides. But I found his condition so much worse than it had been the day before that I at once suspected the existence of iodism. I then learned that the patient had been under the treatment of a druggist—enough to account for any conceivable catastrophe.

All treatment was suspended, and in three days the patient was dismissed entirely cured.—*James M. French, in Jour. Med. Coll., Ohio.*

RHUS AROMATICA IN THE TREATMENT OF INCONTINENCE OF URINE.

In the *Buffalo Medical and Surgical Journal*, October, 1891, Dr. Wm. C. Krauss, of Buffalo, sums up his experience in nine cases as follows:

Incontinentia urinæ, due to slight disorders of the genito-urinary or nervous systems, is amenable to the rhus treatment, and gives most favorable results.

Incontinentia urinæ, due to destructive lesions of the spinal cord, complicating the vesical centre, or its reflex arc, is not amenable to the rhus treatment, and gives negative results.

BENZINE IN PEDICULOSIS.

Nedzwiecki strongly recommends (*Saratovsky Sanitarnyi Obzor*, No. 19, 1891) ordinary commercial benzine as the most effective, cleanly, and convenient application for destroying pediculi capitis or pubis. The affected parts should be freely bathed with the fluid for three or four minutes. Both pediculi and nits are killed almost instantaneously. As a rule, a single application is sufficient, even in severe cases. The smell of benzine is said to disappear very quickly. The remedy can be safely applied, even in the presence of an eczematous rash, since it causes only trifling pain, which soon passes off. In the case of out-patients, the treatment must always be carried out in the day time, as the substance is extremely inflammable.—*Brit. Med. Jour.*

HYDRATE OF AMYLENE IN EPILEPSY.

Dr. Edwin Dunn has given a trial to this remedy, recommended by P. Naecke for epilepsy. He gave it to fourteen patients for twelve weeks, in half-drachm doses three times a day for the first four weeks, and for the remainder of the time four times a day. Twelve of the patients had been previously under the treatment with bromide of potassium. In three the number of fits was increased; in four the number diminished; and in three the number remained the same. Two died in a status epilepticus, one in the first week, the other in the twelfth. Of the two patients not previously treated, in one the drug had no effect, in the other the number of fits was diminished by one-third. During the early weeks of treatment there was a marked improvement in the mental state, but this is probably due to the leaving off the bromide, for after the first month there was a marked tendency for the patients to

pass into a status epilepticus, and in no case ultimately was the mental condition of the patient improved. There was no change one way or the other in regard to bodily condition. He concludes that it was perhaps beneficial in some of the less severe cases, but that in the graver forms it was useless, and that it possesses no advantage over the ordinary bromide treatment.—(*Journal of Medical Science*, October 1891.)

STERILIZATION OF MEDICINES FOR HYPODERMIC USE.

On making gelatine plate cultures from the more commonly-used hypodermic solutions, Dr. Marinucci reports in *Riforma Medica*, October 25th, that some, especially those of eserine and morphine, were teeming with bacteria. He next proceeded to test the effects of sterilization on the above solutions, the method employed being either to boil them or to expose them for a time to a temperature of 100° C. in a Koch's steam sterilizer. He then tested the activity of the solutions thus treated as compared with the same before sterilization, and came to the following conclusions: In all the preparations studied there may develop microbes, of which, however, probably not all are harmful. Sterilization by heat does not alter solutions of strychnine, curare, bi-hydrochlorate of quinine, or borate of eserine; enfeebles but does not alter the character of the action of morphine and atropine, so that the sterilized liquids must be used in larger doses than the non-sterilized ones; it seriously alters sulphate of eserine, rendering the solutions in great measure inert. The solutions unaffected by heat may be sterilized simply by boiling for a time in a *bain-marie*. It is recommended also to sterilize the hypodermic syringes in the same manner. For those solutions which are found to be altered by heat, an excellent method of keeping them sterile is to add corrosive sublimate in the proportion of 1 to 10,000. This is perfectly efficient, and is in no way harmful to the active drug.—*Boston Med. Surg. Jour.*

TREATMENT OF INTESTINAL OBSTRUCTION.

Washing out of the stomach, as first recommended by Kussmaul, in intestinal obstruction, is regarded by Aufrecht as a useful addition to our therapeutic measures. The difficulty is to determine in which cases and under what circumstances it should be carried out, as it is not equally applicable in all cases. On the ground of experience Aufrecht recommends two special indications. The first and most important of these is distension of the stomach, where vomiting is not present or has ceased suddenly. It is estimated that this condition is seen in about one-fifth of all cases of ileus, and its recognition may be made by percussion, the extended deep full note distinguishing it from a distended colon. The absence or cessation of vomiting is often looked upon as being due to the œsophagus being folded over the opening in the diaphragm, and its lumen blocked. However that may be, introduction of a tube takes place without difficulty, and evacuation of a large amount of fluid gives great relief, often without any washing out. A further indication is the occurrence of feculent vomiting. Repeated cleansing of the stomach removes the abnormal contents, and prevents the absorption of injurious material. Aufrecht pleads for the use of morphine in all cases—used subcutaneously. It should be given three or four times daily, according to need, until the patient is free from pain and peristalsis is kept within bounds. Its use by the mouth should be discontinued, its action not being prompt, and the amount absorbed uncertain. Large injections into the bowel he has long ago given up. Only in the very early days can one hope to obtain any useful result. He tried intestinal puncture on two occasions, but no particular good was observed, and he was dissuaded from continuing it by peritonitis being set up in one of the cases.—(*Therapeutische Monatshefte*, part viii. 1891.)

MEDICINE.

DEGENERATION OF THE SOLAR PLEXUS IN THE INSANE.

Several experimenters have found that by inducing lesions of the solar plexus in animals they were able to produce glycosuria, acetonuria, and albuminuria. A knowledge of these results led Dr. Cristiani to see whether the same abnormal substances occurred in the urine of mental patients suffering from degeneration of the solar plexus, a lesion which has been found by him to be evidenced by a so-called "vaso-paralytic diarrhœa." (*Riforma Med.*, September 17th, 1891). This triad of symptoms, if it were found to occur constantly in such patients, would be a valuable aid in the diagnosis and prognosis of this form of diarrhœa. With this object the author undertook the examination of the urine of 10 such patients, comparing the results with others obtained in 15 cases of simple intestinal catarrh and in a similar number of patients without diarrhœa. The

results are as follows: Glycosuria and albuminuria were found in all the first 10 patients, but were absent in the 30 others examined as controls. From a large number of observations by the same author these two signs seem to be very rarely present in asylum patients not suffering from nervous diarrhœa. Acetonuria, which is a constant and lasting phenomenon after experimental lesions of the solar plexus in animals, was entirely absent in the cases observed. As regards the glucose and albumen, either one or the other or both together, would be found on various occasions. In regard to the period of the disease, these symptoms were inconstant as to time of appearance or duration. The fact remained, however, that in the patients with diarrhœa originating in solar disease they were sure to be discovered sooner or later, if daily analyses of the urine were made, while in the urines of the others no such abnormal products were discoverable.—*Brit. Med. Jour.*

CEREBRAL ACETONÆMIA.

Talamon, in an interesting paper, states that a group of nervous symptoms comparable to those of uræmia has been described under the name of acetonæmia, a condition characterized by a reddish color imparted to the urine on the addition of perchloride of iron, and by the peculiar acidity of the breath, which exhales an odor that has been compared to that of chloroform, and which in reality is the odor of acetone or of ethyldiacetic acid. Various observers have concluded that the nervous symptoms were due to acetone acting upon the organism in the same manner as chloroform. The precise pathogeny of this toxæmia, however, has not been chemically elucidated any more than has that of uræmia or cholæmia. The substance which with the perchloride of iron causes the red reaction in the urine may be ethyldiacetic acid (Gerhardt) or diacetic acid (Jaksch). The symptoms of poisoning may result, not from the isolated action of one of these substances, but from a series of chemical decompositions, of which the acetone and diacetic acid are but ultimate products of little importance. Acetonæmia has especially been observed in diabetes and in diabetic coma. Peters and Kaulich have, however, noticed that the odor of the breath and the reaction of the urine are observed not only in diabetics, but also at times in the course of the eruptive fevers in children with measles and scarlet fever.

The searches of Jaksch have confirmed this observation, and have shown that normally the blood and the urine always contain traces of acetone, the quantity of which may be increased in the anaxthemata and in different chronic maladies, particularly carcinoma. Jaksch recognizes three varieties of acetonuria—the diabetic, the febrile, and the carcinomatous. According to him the nature of the febrile process is a matter of indifference. He has noticed this symptom in pneumonia, in typhoid fever, in acute articular rheumatism, and in the eruptive fevers. He has even observed pronounced acetonuria in a case of mania without fever. Acetonuria and diaceturia may thus exist without acetonæmia; in other words, the red reaction of the urine with the perchloride of iron may be produced in the absence of symptoms of acetonic toxæmia. Talamon relates the case of a girl of fifteen with a history of an attack of acute articular rheumatism with endocarditis. On the fifth day the temperature reached 105.8°, and the girl presented a condition of marked nervous excitement and delirium, this being characterized by incessant agitation and terrifying hallucinations, and accompanied by an odor of acetone in the breath and a ruby read reaction of the urine with the perchloride of iron. The delirium lasted five or six days, and disappeared synchronously with the disappearance of the odor of acetone in the breath. From a study of the case reported, and from a review of the literature of the subject, Talamon concludes: 1. Certain of the nervous phenomena that appear in the course of acute febrile diseases may be attributed to acetonæmic intoxication. 2. These acetonæmic phenomena are characterized by the peculiar odor of acetone in the breath and the ruby-red reaction that the urine presents with the perchloride of iron. 3. The delirious acetonæmia of articular rheumatism may simulate cerebral rheumatism, from which it is to be distinguished by the absence of hyperpyrexia and by the characteristics of the urine and of the breath. —*Lancet.*

REAPPEARANCE OF EPIDEMIC INFLUENZA.

Recent reports from widely separated countries show that there is considerable prevalence in scattered areas. From special inquiries which we have made we learn that influenza has been prevalent in Dundee since the second week in July, causing, we are informed, two or three deaths monthly, but since the beginning of the present month it has spread rapidly. A large proportion of the time of medical practitioners in the city

has been devoted to these cases. Whole families of five and eight persons have been laid up at one time. The only complications so far have been bronchitis and excessive prostration with a prolonged period of loss of appetite and want of energy. The epidemic has also appeared in Galicia, introduced, it is said, from Russian Poland and Russia. "Thousands" of cases are stated to have occurred in Lemberg and other Galician towns, and a few in Vienna. The epidemic is reported to be severe in Prussian Silesia, 500 cases and several deaths having occurred in the town of Münsterberg alone. Epidemic influenza is also said to have broken out in Paris during the past week. Advices from Victoria state that the disease is rife in Melbourne and has spread to the country districts. —*Brit. Med. Jour.*

PYREXIA AND ANTIPYREXIA—NERVOUS AND ARTIFICIAL.

Richter (*Inaug. Diss.*, Breslau, 1891), gives an account of some experiments made by him on pyrexia and antipyrexia. He first of all discusses the mechanisms by which the temperature can be lowered, and concludes, as a result of calorimetrical experiments upon animals in which fever had been artifically induced by the injection of infusion of hay, that fever consists in a shifting of the heat regulation mechanism. He therefore adopts Filehne's theory of fever. The difference between a nerve temperature and fever is next discussed, and the author does not believe that there is in the brain any heat centre of damage which can cause fever. He regards the pyrexia which may be brought about by damage to the corpus striatum as quite distinct from fever, being only a temporary disturbance of the heat-regulating mechanism.—*Brit. Med. Jour.*

WARM ETHER AS AN ANÆSTHETIC.

We learn from the *Independencia Medica*, of Barcelona, that on October 31, Dr. Giné y Partagás performed an operation for osteoma of the fibula on a woman, in the Hospital de Santa Cruz, of that city, the anæsthetic used being ether warmed to 31°C., which was administered by Dr. A. Diaz de Liaño, with an apparatus of his own invention. Anæsthesia was rapidly induced and was kept up for fifty-five minutes without any accident. The temperature of the ether remained at 31° nearly to the end, when it fell to 29.5°. The apparatus, which is called by its inventor an "Electrothermo-etherizer," has since been used in several other cases with equally satisfactory results, anæsthesia having, on one occasion, been kept up for two hours and a half without any ill effect. Dr. Diaz de Liaño claims that by his method the disadvantages both of cold ether and of chloroform are obviated. Our contemporary promises a full description of the apparatus at an early date.—*Brit. Med. Jour.*

SURGERY.

TREATMENT OF OLD ULCERS OF LEG.

Dr. Charles P. Elwert, of New York, writes the *Medical Record:* "I have treated in the past six months, at Demilt, Bellevue, and Vanderbilt Dispensaries, and also in my private practice, forty-six cases of varicose and other ulcers of the leg, and have obtained favorable results in thirty-four cases, by the following method: Cleanse the ulcer by irrigating with a solution of corrosive sublimate, 1 to 5000. Then dry thoroughly with absorbent cotton, and apply daily the following powder:

℞

Iodoform	ʒ ss.
Sulphate of cinchonidia	ʒ j.
Wood charcoal	ʒ ijss.

If any discharge appears after applying the powder, use absorbent cotton before applying the powder again, Advise the patient to rest and to keep the leg elevated. Keep the bowls regular with a mild laxative, and give some stimulating tonic to improve the condition of the general system. In the case of four patients the powder caused irritation, and the discharge was increased. On further examination of those patients I discovered the existence of Bright's disease. In six other cases, where the above treatment was not successful, a poultice composed of powdered wood-charcoal and matricaria was used for three or four days, until I obtained a healthy appearing surface to the ulcer; and I then applied daily the following solution:

℞

Tr. calendulæ	ʒ ij.
Aquæ champhoræ	ʒ viij.

After applying the solution, I strapped the ulcer with adhesive plaster, with good results in four of the above six cases, and gave laxatives and a tonic. As the treatment of chronic ulcers at the present day is not very successful in a large percentage of cases, especially in dispensary practice, the above treatment may be of use to the profession."

UNION OF CUT-OFF FINGERS.

Herr Gluck related among other things which he brought up before the Berliner Medizinische Gesselschaft (*Deut. Med. Zeit.*), the case of a butcher who cut off the distal phalanges of his middle and ring fingers with a cleaver. The reporter, forty minutes after the accident occurred, picked up the severed fingers from the floor, disinfected them, resected the bones and sutured carefully. A complete union took place. Sensation, however, only returned in six months. A difference in the length of the fingers which were injured, and those of the other hand could not be perceived. However, a certain amount of atrophy was observable in the ends which had been severed.

SPIRITS THYMOLINI, COMPOSITUS—A SUBSTITUTE FOR LISTERINE.

C. D. Lippincott writes (*Phar. Rev.*): Listerine, as introduced by Dr. Lambert, is a step in progressive pharmacy. This new antiseptic disinfectant and prophylactic has become popular in nearly all civilized countries. While a mechanical mixture in itself, it exhibits the manifold properties of its constituents, and occupies a prominent position in the long catalogue of medico-surgical and therapeutic agents of modern practice. While we justly admit we are indebted to Dr. Lambert for its introduction, yet as professional pharmacists we do not feel like being confined to the necessity of dispensing empirical or proprietary preparations; hence it behooves us to come to the front with a substitute, which we all may manufacture and which will, beyond doubt, prove equally efficacious in its object. Such a preparation I herewith respectfully submit for your careful consideration, and invite research and experiment, with a view to possible improvement of this formula. I also recommend the adoption of a definite term for such a preparation. To me the term Spirits Thymol Compound would not be inappropriate, conveying, as it does, an intelligible meaning to physician and pharmacist. The Lambert Pharmaceutical Company, of St. Louis, place their formula upon each bottle of their preparation as follows. They say: "Listerine is the essential antiseptic constituent of thymol, eucalyptus, baptisia, gaultheria and mentha arvensis, in combination. Each fluid dram also contains 2 grains of refined and purified benzo-boracic acid." Given internally, they advise one teaspoonful three or four times a day, either full strength or diluted with water, or in combination with other drugs. My formula for what, for the present, I will call Spirits Thymol Compound, is as follows:

℞

Acid benzoic, Sodium biborate	of each	ʒ i grs. xxxii
Boric acid		ʒ ii grs. lxiv.
Dissolve with the aid of heat in distilled water		ʒ xlviii

Then add

Thymol		grs. clx.
Eucalyptol, Oil of wintergreen	of each	drops xl.
Oil of peppermint		drops xxiv.
Oil of white thyme		drops viii.
Previously dissolved in alcohol (94 per cent.)		ʒ xxiv.
Mix the two solutions, add caramel		drops x.
Distilled water q. s. to make 1 gallon.		

Let the mixture stand 24 hours, and finally pass through a wetted filter.

OBSTETRICS.

TOBACCO IN OBSTETRICS.

Some practitioners take their *rôle* in the lying-room very much *au sérieux*, and act as if they considered themselves personally responsible for any little hitch in the arrangements, with the result that the parturient female is occasionally subjected to treatment which is, to say the least of it, startling. We cannot better illustrate the point than by a recently-published contribution from the pen of Dr. J. F. Bird, of Philadelphia. He relates having been called to a case of labor which resisted all the usual means of bringing about the dilation of the os. The labor was at full term, and the pains were excessively severe and regular. At his first visit he bled the patient, *horresco referens*, to the extent of sixteen ounces without the slightest effect. For the ensuing twenty-four hours he administered antimonials *ad nauseam*, with no better result. He then opened a vein in the arm, and again drew blood, *pleno rivo*, still producing no relaxation, although he carried the bleeding "as far as was consistent with safety." This resourceful practitioner's next inspiration was the pipe, and his patient had been smoking but a short time before nausea occurred, an din twenty minutes the dilatation was complete, and the child was expelled immediately, and in good condition. The success which attended his experiment on this occasion induces him, twent-five years after date, to urge upon his brethren to include a couple of cigars (quality no object) in their obstetrical armamentarium. He affirms the effect to be "magical" and "highly gratify-

ing." It is of course to be understood that such effects can only be obtained in women who are not acclimatized to the weed, but we gather from Dr. Bird's remarks that some of his patients took very kindly to the innovation both then and afterwards. Most doctors do not go further than themselves to smoke the pipe, but in future we may anticipate that patients will insist upon undergoing the treatment, and will decline to admit the *quid fecit per alter fecit per se.—Méd. Press.*

PRURIGO IN CHILDBED.

Krastilefsky (*Nouvelles Arch. d'Obstêt. et de Gynéc.*, October, 1891, Supplement, p. 457) has recently published, in a Russian paper, a case where a woman, who had borne fifteen children, suffering on each occasion, from a week before delivery to the second day of childbed, from a general idiopathic prurigo. No cause could be discovered for the cutaneous trouble. Great relief was afforded by hot baths, and by a lotion composed of carbolic acid 4 parts, glycerine 30 parts, and distilled water 180 parts.

IMPREGNATION FROM SEMEN DEPOSITED ON THE VULVA.

R. C. Longfellow, *Cincinnati Lancet Clinic*, 1891, p. 633, saw patient who denied ever having indulged in sexual intercourse. Her companion afterwards gave Dr. Longfellow the following particulars: "Some three and a half months before, he had attempted to introduce the penis in the vagina. It was impossible to do so on account of the pain given to the lady, but soon an emission of semen occurred on the vulva. Soon after they left his office without making any toilet, the semen being allowed to remain on the vulva over night. This only occurred once between them, and the next menses did not appear, as also the second and third, which was attributed to a cold. She becoming anxious, asked him to consult a physician and get a recipe."

The lady was asked to come to the office, and was persuaded to have an examination made, to confirm my diagnosis. When examined, the vulva presented a virgin condition, a thin hymen present, and the vaginal orifice so small as to hardly admit the small finger. In so doing the hymen was ruptured. As there was no vaginismus present, the disparity of the sizes of penis and vaginal orifice gave conclusive evidence that no penetration had occurred.

AIR IN PARTURITION.

Dr. P. McCahey, in an article in the *New England Med. Monthly*, says that the subject of the utilization of air in the function of parturition is an interesting and important study, and promises to furnish a means by which many accidents, hitherto unavoidable during labor, can be prevented.

He is aware that some will disbelieve that air exerts any direct influence in parturition, but when they consider that it is employed as a mechanical agent by many other organs of the body, they ought not to deny to the uterus the privilege of availing itself of the assistance of this powerful force.

Prior to the rupture of the membranes there is probably no air within the uterine cavity, except that which is held in solution in the amniotic liquor.

Immediately after the rupture of the membranes, however, air enters the uterus, and takes the place of the liquor amnii which has escaped. This displacement of fluid by air can be readily recognized by simple percussion of the uterine globe.

Percussion before escape of the amniotic liquor will give universal flatness or dullness. Percussion after their escape and throughout the second stage, will give diminished dullness over the fœtal parts, but distinct resonance at or near the fundus, and on the sides, *i. e.*, above and on each side of the child. Percussion after the expiration of the third stage, when the uterus has contracted into a hard ball, will give general dullness again. Percussion several hours later, when the uterus has become slighly relaxed and has ascended towards the umbilicus, will give resonance again.

These observations, he thinks, indicate that air is an important factor, not only during parturition in transmitting the muscular contractions with expansive force against the fœtus, and thus producing delivery, but that it is also a prime factor in causing the ascent of the uterus during pregnancy and for a brief period after delivery, and possibly in supporting it at all times. They also indicate that rupture of the perineum and rupture of the uterus, are not always due to direct muscular action, but are in great part the result of the sudden expansive force of the intra-uterine air when subjected to intense compression by the abdominal muscles, and confronted by a rigid perineum, or a firmly impacted head.

They also indicate, he thinks, that many hitherto unexplainable cases of still-births have been due to the subjection of the chil-

dren for too long a time to intense intra-uterine air pressure, and that they died as inevitably as adults will die who remain too long in compressed air, as in a caisson.

The facilitation of delivery, he believes, is therefore admirable in many cases, not alone for relieving the mother from pain and danger, but for the purpose of removing the child from a possible cause of serious disease, if not death, and delivering it healthy and vigorous, as well as alive.

GYNÆCOLOGY.

ELECTRICITY IN THE TREATMENT OF UTERINE FIBROIDS.

Chevrier (*Nouvellés Arch. d'Obstét. et de Gynéc.* October and November, 1891), after careful clinical research, has arrived at the following conclusions: The results following electricity in the treatment of uterine fibromyomata are inconstant and unsatisfactory; most of the patients, sooner or later, are obliged to undergo surgical operations for which they are not so well prepared as before the electric treatment. As a solvent of exudations, galvanism is absolutely ineffective. As an analgesic, it is very untrustworthy. As a hæmostatic, it gives fair results. Removal of the appendages does not give worse statistics than galvanism, and its results are better as to the rapidity of relief and duration of effects. In pedunculated tumors the continuous current is quite useless. Castration gives satisfactory results, but in these cases removal of the tumor is indicated, especially when pain and symptoms of pelvic pressure are well marked.—*Brit. Med. Jour.*

INCOMPLETE REMOVAL OF DISEASED OVARIES.

At a meeting of the Société de Chrirugie, Routier (*Ann. de Gynéc. et d' Obstét.*, November, 1891) said he objected on principle to Pozzi's method of conservative operations on the sclero-cystic ovaries. Conservative surgery, he holds, is irrational in cases of the kind, in oöphoro-salpingitis, and in cases of sclerosed ovaries where the tube is healthy. Pathological anatomy shows that in ovaries under these conditions all the ova tend to cystic degeneration. The stump left with part of the ovary on it is liable to to a return of disease, with the attendant sufferings for which the patient originally desired operation. At the same time, the patient is just as surely sentenced to sterility as though the whole of the appendages had been removed. The failures in many cases included in long series of operations for the entire removal of the appendages are in no small part due to the imperfect removal of the ovary; thus a piece of the ovarian tissue may be left on the distal side of the stump. It is equally unsatisfactory when the Fallopian tube is purposely left behind. In one instance Routier failed to cure a case of hæmorrhagic metritis with the curette. He removed the ovaries and left a healthy tube, all the trouble returned—a fact favoring Tait's theory on menstruation. At length Routier had to remove the uterus by the vagina. In two other cases, in women with metritis and retroflexion, where the curette had cured the flooding but not the pain, he fixed the uterus in position by hysteropexy, but left unremoved the almost healthy appendages on one side. A few months later he was compelled to perform vaginal hysterectomy. Pozzi replied that it was not by any means certain that a woman must necessarily remain sterile after conservative operations on the ovary of the kind which he recommended.—*Brit. Med. Jour.*

PÆDIATRICS.

NAPHTHALIN IN WHOOPING-COUGH.

Many remedies have been vaunted for the cure of whooping-cough, but with little satisfactory results in the majority of cases. A proposal to add napthalin to the long list of so-called cures has arisen in the following manner: Dr. Chavernac, of Aix, during a recent epidemic, seems to have allowed his son, who was 18 years of age, while suffering from the affection, to continue to attend school. One day the lecturer on science had burned some substance which gave off very strong fumes, which, though disliked by many of the boys, had the effect on him of immediately stopping a violent fit of coughing. As soon as the windows were opened, and the fumes passed away, the cough recommenced as violently as ever. His father, having discovered that the fuming substance was merely naphthalin, had about an ounce of it burned in the lad's bedroom, with the result that he breathed a great deal more easily, and only had one slight attack during the night. The next day, being at school, he had several attacks, but they were somewhat less severe than they had previously been. The next night the drug was again burnt in the bedroom, and this second dose entirely cured both the cough and the expectoration, which latter had been rather profuse. The father was then attacked, and in three days cured himself by the same treatment. He

subsequently tried it with several of his patients with marked success, and with the concurrence of a friend, who was medical officer to a convent school where the epidemic was raging, he tried it on thirty affected children. After the naphthalin had been burnt two successive nights in their dormitory, they were all cured. Two of the nuns, however, found the fumes very irritating, and, on these ladies being examined, it was discovered that they were both suffering—quite unknown to themselves—from incipient phthisis. From this, and from further observations, Dr. Chavernac has come to the conclusion that naphthalin is contra-indicated in phthisical persons, and that it may sometimes serve to reveal the existence of totally unsuspected tubercle. It may be remarked that the so-called albocarbon used freqently for enhancing the lighting power of gas, is somewhat crude naphthalin. The method employed by Dr. Chavernac is to place about three-quarters of an ounce in a metal dish surrounded by hot coals. It soon melts, and before long fills the room with white fumes, which he considers by no means unpleasant. The old custom of taking children to gas works for whooping-cough has generally thought to depend on the curative effect of gas tar; but from the above it would appear that the naphthalin which crystalizes out in the retorts and pipes is, perhaps, really to be more credited with efficacy than the tar.—*Lancet.*

TREATMENT OF CONVULSIONS IN CHILDREN.

In the treatment of convulsions Decroizilles (*L'Union Médicale*) recommends that the child be taken at once to a well-ventilated room, and that the clothing be removed in order to discover any points of irritation to the skin. A lukewarm bath, either with or without the addition of mustard, should next be given. The head should be kept cool by means of cold applications, or even by a stream of cold water kept constantly running upon the fontanelles. In Germany and Switzerland convulsions produced by hyperpyrexia are treated by plunging the child at once into a cold bath. As the irritation may be due to the digestive tract the fauces should be titillated or an emetic administered. If the stomach be tense it is advisable to use a purgative, 10 to 20 cgrm. (1½ to 3 grs.) of calomel, or 5 to 15 grammes (lxxx to ℥ss) of castor oil, or 8 to 16 grammes (f℥ij to f℥ss) of manna suspended in milk. If the child has given passage to a worm an immediate vermifuge should be administered. If there be cerebral hyperæmia, the application of several leeches behind the ears or to the thighs or the tibio-tarsal region is recommended. In vigorous children venesection, either from the arm or from the saphenous vein, can at times be employed. Warm cataplasms, prepared with mustard, can be applied to the lower limbs. The carotid arteries, following the precautions laid down by Trousseau, may be compressed with care. Inhalations of chloroform are capable of giving good results, but they are only transient, and their repetition is not without danger. When the duration of the convulsion is prolonged, 5 to 40 cgrms. (¾ to 6 grs.) of oxide of zinc, with equal parts of henbane, may be given. The bromides, associated with chloral, give especially good results. The dose of the bromide should be ½ to 1 gramme (7½ to 15 grs.) in very young children, 2 to 4 grammes (℥ss to ℥i) in older children, and 4 to 6 grammes (℥i to ℥iss) in those approaching convalescence. Chloral should be administered in 5 cgrms. (gr. ¾) in the newborn baby, 15 to 20 cgrms. (2¼ to 3 grs.) in the nursing baby, 20 to 30 cgrms. (3 to 4½ grs.) below two years, and 40 to 80 cgrms. (6 to 12 grs.) in children from 7 to 13. The administration of chloral should be promptly suspended and renewed if there be any necessity. After the attack the child should have complete rest; and tonics, with the prolonged use of the bromides, cold affusions to the head, with baths and strict hygienic alimentation, should be ordered. It is wise, from time to time, to advise that the child be given small doses of calomel, valerian and oxide of zinc.

INHALATIONS OF OZONE IN THE TREATMENT OF WHOOPING-COUGH.

Dr. Hellet sets forth, in the *Revue International d'Electrotherapie*, the results which he obtained in the treatment of whooping-cough with ozone, as follows:

Ozone produced by electricity has never given rise to unpleasant effects in our hands. We have ascertained that ozone is a powerful reconstructive, an incomparable modifier of the blood, since it is necessary to breathe strongly ozonized air for only a quarter of an hour in order to increase, in certain cases, the proportion of oxyhœmoglobin one or two per cent. when it is already 14 per cent.

Though opinions may have differed concerning the beneficial therapeutic effects of ozone, there has not been any dispute about its disinfecting and antimiasmatic actions.

Numerous experiments have shown that it acts powerfully upon germs and ferments, that it arrests their development and even destroys them. In view of this fact, and remembering also, that ozone is a powerful reconstructive, I do not hesitate to prescribe inhalations of ozone to little children suffering from whooping-cough, thinking that this disease, which is of microbic origin, would be favorably modified.

Up to the present time only four cases have been treated: a girl of six years, another of five, another of two, and a boy of fifteen months. These children inhaled ozone every day for fifteen minutes. In every case the number of paroxysms was carefully noted.

In all of these cases the course of the disease was favorably modified. The number of paroxysms diminished, and their general condition rapidly improved, which is a very important consideration; they became cheerful, and the appetite was restored.

The parents always noted that the children became more playful after the inhalations of ozone; their paroxysms became less violent and less exhausting.

The duration of the disease seems to have been shortened.—*La Medecine Moderne.*

SOME REMARKS ON THE TREATMENT OF DIPHTHERIA.

Dr. Szuman, of Thorn, remarks that all internal remedies applied against diphtheria may divided into three categories: (1) Remedies dissolving fibrinous membranes; (2) antiseptics, and (3) specifics for diphtheria. In the light of the progress of science, which has proven that the membranes are not the real localization of the disease, but the deeper-lying tissue, and very often the whole organism, the value of the remedies of the first category become very doubtful. A somewhat greater value is attributed to antiseptic drugs, their value being seen principally in the preventive treatment. Of the drugs in the third category, it can only be said that none deserves the name of a specific. Later, acids began to be employed; their action, however, is not as yet sufficiently known.

The method that Dr. Szuman employed is founded upon the application of three acids, namely, upon the internal administration of acetic acid, inhalations of carbolic acid, and gargling the throat with a solution of boric acid. The result of this treatment, in comparison with those employed up to the present time, is satisfactory, because out of thirty cases treated by this method all recovered. Though, indeed, in two cases the diphtheritic process extended into the larynx, nevertheless recovery ensued—in the first after inhalations of acetate of aluminum, together with internal treatment, and in the second after tracheotomy.

Reflecting upon the mode of action of acids on the human organism, the author came to the conclusion that we may, perhaps, have to do here with local action, the observations showing that acetic acid can pass through the unbroken skin; and Brun's experiments proving its antiseptic properties, even when much diluted, confirms this opinion. He does not exclude the possibility that the acid reaction in the oral cavity arrests the diphtheritic process. The employment of alkalies, viz., lime water, acting on the development of putrefaction, as well as all mechanical methods, he regards as dangerous, and believes that the advantages of his method consist in constantly keeping the throat and oral cavity in a state of disinfection and acidity, which arrest the putrefaction of membranes.

CITY DUST.

Dust, like the poor, we have always with us, nor has Hygeia with her newest brooms yet succeeded in banishing it. Yet there is abundant evidence to show that a dusty street contains more lurking potentialities of mischief than a jungle peopled with the hungriest wild beasts. To the researches of Miquel and others can now be added the results of an elaborate investigation by Dr. Luigi Manfredi of the composition of the dust of the streets of Naples. The number of microbes of all kinds found in it amounted on the average to 761,521,000 per gramme. Remarkable differences in the proportion of micro-organisms were, however, observed in the dust from different quarters of the city. Thus, in the streets least exposed to contamination, that is to say, where there was the least traffic and where the hygienic conditions were most satisfactory, the average number of microbes in the dust was only 10,000,000 per gramme. On the other hand, in the busiest thoroughfares, the average rose to 1,000,000,000, and in some of the dirtiest streets to the enormous figure of 5,000,000,000 per gramme. In this "endless ocean" of infinitesimal life, there was a large number of pathogenic organisms, and the unhealthiness of the street or quarter was directly proportional to the number of microbes in the dust. Dr. Manfredi carefully tested the infective power of the dust, and obtained positive results in 73 per cent. of his experiments. Of forty-two

cases in which he communicated disease to guinea-pigs by inoculating them with Neapolitan dust, he found the microbe of pus in eight, the bacillus of malignant œdema in four, the bacillus of tetanus in two, the bacillus of tuberculosis in three, not to mention several other microscopic *ferœ naturæ* possessing the power of inducing fatal septicæmia in the unfortunate guinea-pigs on which they were tried. The moral pointed by these discouraging facts is that our Ædiles should take the Dutch housewife for their example, and wage relentless war against dust and dirt of every kind.—*Brit. Med. Jour.*

SHORTENING OF BEIDERT'S METHOD FOR FINDING TUBERCULAR BACILLI IN THE SPUTUM.

Dr. Kronig has applied the centrifuge to the examination of the sputum, with the result that a considerable number of tubercular bacilli were found in a case where the ordinary method had failed to reveal them. The sputum was diluted with a solution of caustic soda, and on the application of centrifugal force for five minutes, a somewhat compact sediment was separated, which gave the above result on examination. By Beidert's method the sputum so diluted has to stand for two or three days to allow of the precipitation of the bacilli. Professor Litten has explained the application of Stenbeck's centrifuge to clinical medicine.—*Boston Med. Sur. Jour.*

FISSURES OF THE ANUS IN CHILDREN.

Dr. Bruun (*Hospitals-Tidende*, R. 3, Bd. 8, S. 1089) finds the use of lime water as an addition to milk a frequent cause of constipation and consequent fissures of the anus in children. Any cause which produces diarrhœa, with following constipation, will cause it. Constipation, proctitis, and severe pains on defecation are the results of a fissure. Hernia and masturbation are possible consequences. The condition may be long-lasting, although it is easily discovered when attention is called to it. He treats it by regulating the diet, cleanliness, irrigation of the rectum, and dilatation of the sphincter ani, which is easily done.

EARACHE.

℞

Chloral. camphorat.....parts 5.
Ol. amygdal. dulc..... " 10.
Glycerin..... " 30.

M. Sig. Apply on cotton, and introduce into the ear.

—*The American Doctor, April, 1891.*

HYGIENE.

WHAT IS EFFICIENT VACCINATION?

That there is a difference of opinion, both in and out of the profession, as to what constitutes efficient vaccination is evident from the frequency with which the question is put by mothers, "In how many places do you vaccinate?" My invariable reply is, "In four places." This often provokes an earnest appeal only to vaccinate in two, and sometimes even in one place, and this request is followed up by the remark, "Dr. So-and-So only puts two on," and I have heard medical gentlemen credited with vaccinating only in one place, and with avowing that one was enough.

After a little reasoning, I generally gain my point, and four vesicles is the result. If the mother continues obstinate, I give in to three, but in a measure I still gain my point by trying for, and generally securing three extra large vesicles on the eighth day.

Below three I never go, and if the parents —for the father is sometimes appealed to— still hold out, then I decline to vaccinate the child, and retire from the case.

There ought not to be such a difference of opinion amongst medical men as to how many vesicles give evidence of protection from small-pox; and if we were unanimous, mothers would soon be willing and even wishful for their children to be efficiently vaccinated. Public vaccinators are enjoined, in the instructions they receive from the Local Government Board, to secure, if possible, four good vesicles on the eighth day.

A few years ago, when application was made to the Local Government for calf lymph, with the lymph came a leaflet of instructions, which advised, amongst other things, that the "lymph be rubbed into each of four or five places" in the child's arm. These instructions are now discontinued.

During the epidemic of small-pox in Leeds in 1870, my colleague, Dr. Fredk. Hall, and I, having charge of the small-pox hospital, tabulated the evidences of vaccination of each case on admission. We found that those cases who showed four vaccination cicatrices on the arm were few in number, and had the disease in a mild form. Those with only three or two marks on the arm had the disease more severely, and were in the hospital a longer period, and of the unvaccinated cases the majority died. This was conclusive evidence that at least four vesicles should, if possible, be obtained, and thus secure what is generally considered efficient vaccination.

Imperfectly vaccinated cases, when they fall victims to the small-pox, are just those who, being registered as successfully vaccinated, throw discredit on the system, and generally help to keep up the disease in an endemic form.

As a remedy I would venture to make two suggestions: (1) That a short paragraph be inserted in the ordinary vaccination certificate, informing the parents that the child should be vaccinated in at least four places, and that this, and this only, constitutes efficient vaccination. (2) That a small space be left, say just above the date and signature on the third page of the certificate, in which space the vaccinator be required to note in figures the number of places in which the lymph has been inserted, and the number which have "taken" on the eighth day, and that these figures be duly entered by the registrar in his book. Thus, in after years, when small-pox breaks out, the names of the victims can be turned to in the register, and the number of vesicles noted, which had originally been obtained and certified as successful vaccination.

In this way valuable evidence will be obtained as to what constitutes efficient vaccination, and the more strictly carrying out the requirements of the law will be facilitated. I am, etc.—Henry C. Libbey, in *British Medical Journal.*

BENZINE AS A PREVENTIVE OF TRICHINOSIS.

Dr. Putter, jun., of Stralsund, reports in the *Deutsche Medicinische Wochenschrift* on the favorable effect of benzine after the consumption of pork full of trichinæ. A pig had just been killed, and some hours after twenty-seven people had eaten of the meat the inspector informed the owner that the animal had been suffering from trichinosis. All the twenty-seven people, adults and children from fourteen to seventeen years, had boiled pork for dinner; the wife of the owner and four other women, in making sausages, had repeatedly tasted the raw material. Dr. Putter was informed of the mishap the same evening, and prescribed 270 gelatine capsules, each to contain seven and a half grains of benzine; each person to take five capsules the next morning before breakfast, and an hour later a large teaspoonful of pulv. rhei. and pulv. glycerrhizæ co. in equal parts—the children, of course, less in proportion. The same dose was to be repeated in the afternoon, and the purgative only the next day. The benzine was well borne by all the patients, a few only complaining of malaise aud eructations, but none of them vomited. Eight months later all the twenty-seven people were still perfectly healthy, as were the women who had tasted the raw sausages. Dr. Putter is so convinced that his treatment alone prevented the people from being attacked by trichinosis that he recommends it warmly in all similar cases.—*Lancet.*

MEDICAL CHEMISTRY.

ACETANILIDE FOR THE PRESERVATION OF HYPODERMIC SOLUTIONS.

Thomas J. Keenan writes in the *Amer. Drug.* of the various chemical bodies known to exert an inhibitory action on the development of the fermentative and fungoid growths which occur in simple solutions of the alkaloids prepared for hypodermic use, and in solutions of organic chemicals generally, acetanilide, from the consideration of its non-irritating properties and its efficiency in weak solution, in his opinion easily takes first place.

Glycerin, alcohol, salicylic acid, boric acid, chloroform, and a host of others, chiefly derivatives of the aromatic hydrocarbon series, have been at different times strongly recommended for their individual properties, and used with favorable results; but experience has demonstrated that all have their objectionable features.

Glycerine is seldom used on account of its slightly irritating properties and the increase of density which follow its addition.

Alcohol is irritating and liable to cause precipitation.

The chief objection to the use of salicylic acid, apart from its readiness to react with other chemicals, and one which may be overcome at the discretion of the pharmacist, is the strength in which it is directed to be used.

This is stated by the compilers of the Addendum to the British Pharmacopœia, and other official bodies, to be a saturated solution representing about one grain in one fluid ounce, thus affording a concentration considerably in excess of the amount actually required; solutions prepared wlth it in the proportion of one-eighth grain in one fluid-ounce keeping equally as well as the stronger ones, besides being less liable to cause the precipitation which sometimes takes place in concentrated solutions of morphine or similar bodies of long standing.

Boric acid is only suitable for a limited application, being, however, especially well

fitted for the preservation of cocaine solution when the latter is intended for local application.

Chloroform, in the form of Aqua chloroformi (N. F.), is generally considered the most useful of any of the preservatives yet proposed, and is, perhaps, more widely employed than any other in the list here given. It is non-irritating and convenient of use, besides being free from the danger of reacting with the substance it may be added to. It is, however, less reliable, in his opinion, from its evanescent nature, than either salicylic acid or acetanilide, particularly when evaporation is assisted by the frequent removal of the stopper in extensive dispensing.

IMPROVED PROCESS FOR CONDENSED MILK.

A Russian chemist uses a centrifugal machine for separating the cream and skimmed milk. The casein is then precipitated from the latter, and condensed at a low temperature in a vacuum pan having a sight of colored glass which admits yellow or red light, it having been found that the more refrangible rays have a deleterious action on the miscibility with water of the condensed product. The acidity of the milk is not allowed to exceed a limit of 5.5 (Soxhlet-Henkel), and to this end a definite quantity of caustic or carbonated alkalis or alkaline earths are added to the milk. The condensed milk is mixed with the cream and milk sugar.

DETECTION OF FATS MIXED WITH VASELINE.

Caustic alkalies are without action on the normal constituents of vaseline in the process to be described, whilst they combine in definite proportions with the fats to form soaps. Experiment has determined that 10 gm. of these fatty compounds absorb 1.635 gm. of potassium oxide, K_2O, and the calculations are based on this. A standard alkali solution is prepared by dissolving about 20 gm of potash in 100 cc, of 90 per cent. alcohol. This is standardized by means of standard sulphuric acid. A neutral alcohol is prepared by dissolving one cc. of phenolphthalein in 500 cc. of 90 per cent. alcohol, then alkali is stirred in drop by drop until a very slight rose tint is produced. Ten gm. of the vaseline to be tested are placed in a 200 cc. porcelain basin, ten cc. of standard alkali added, the basin being kept on a water bath during the whole process; 50 cc. of neutral alcohol are now added, the solution heated nearly to boiling, and the mixture stirred for eight minutes, when the saponification will be complete, and normal sulphuric acid added drop by drop until *all color* has disappeared. This point is very important. If too long a time has been taken it may be necessry to add a fresh portion of neutral alcohol to replace the loss by evaporation. The amount of sulphuric acid run in, subtracted from that required to saturate ten cc. of alkali solution. multiplied by 0.0047 gives the quantity of potash absorbed by the fats in ten gm. of vaseline, and this number divided by 0.0163 gives the percentage of fats in the vaseline.—Mr. Vizern and C. Nicolas in *Journ. de Pharm.*, after *J. Chem. Soc.*

REMEDY FOR BUMPING.

E. Pieszezek, in the *Chemische Zietung*, gives a description of a simple device made use of by him for the prevention of the phenomenon known as "bumping" in boiling liquids. It consists in placing a glass tube about 5 to 8 ccm, in length, and 5 to 10 minims in width (the exact dimensions depending upon the bulk of the liquid to be boiled), and closed at the upper end, resting upon the side of the flask or other vessel to be heated, so that it stands nearly vertical, with its open, sharp-edged end pointing downwards. Boiling goes on quietly when once started, the bubbles making their appearance at the lower end of the tube. On cooling, the liquid rises in the tube, which must therefore be raised and allowed to again become full of air before beginning the boiling again. The device is said to be efficient even for liquids containing heavy precipitates such as barium sulphate and lead sulphate, and is also recommended for the Reichart-Vollny process.

THE ESTIMATION OF MILK SUGAR IN MILK.

The main difficulty in the determination, as ordinarily carried out, is in obtaining a filtrate sufficiently clear for titration. As prepared by the usual methods, it is opalescent or even quite turbid from the fat which passes through the filter.

It has been found, by making use of the well-known property of aluminium hydrate, to drag down precipitates, and by following the recommendations of Radliscu (*Mittheil. d. pharm. Inst.*, Erlangen, iii., 93) regarding the amound of acid, intensity and duration of heating, all of which are of great importance in the rapidity and completeness of the curdling, that a clear filtrate is readily obtained.

The method is as follows: 25 cc. of the milk are mixed with 15 cc. of "milk of alumina," and 0.5 cc. of 25 per cent. acetic acid added, the mixture stirred and heated five to seven minutes in a water bath the temperature of which is 85° C.; 100 cc. of water are now added, and the mixture is heated in boiling water for ten minutes, with frequent stirring. It is thoroughly cooled under the tap, allowed to settle, and decanted through a plaited filter (Schleicher & Schüll, No. 597) into the 500 cc. graduated flask, being careful to bring as little precipitate upon the filter as possible. The operations of boiling and filtering are repeated three times, and the filtrates made up to 500 cc. It is then ready for titration by Fehling's solution in the usual way.

The "milk of alumina" is prepared by precipitating at the boiling temperature 125 gm. ammonia alum with ammonium hydrate, washing the precipitate by decantation, and making it up to 1 L.

The method has been in use by the students at the Massachusetts Institute of Technology for a year, and given very satisfactory results.—Aug. H. Gill, in *Journ. Anal. and App. Chem.*

NEWS AND MISCELLANY.

A Chinese translation by Dr. Hunter of the British Pharmacopœia has been recently published.

Lysol has been found to deodorize a case of moist gangrene, in which a solution of permanganate of potash, and creolin had failed.

A successful case of bone-grafting is reported from Allahabad, a solution of continuity in the anterior layer of the frontal sinus having been induced to take on osseous repair by sprinkling the surface with "small fragments" of the hip-bone of a newly killed dog.—*Medical Press.*

MATTHEWS DUNCAN MEMORIAL.

At the last meeting of the Aberdeen University Court a letter was submitted from Professors Alexr. Ogston and R. W. Reid, formally handing over to the Court a bust of the late Dr. Matthews Duncan, to be placed in the Medical School, and a check for £140, to be invested to provide a gold medal to be known as the "Matthews Duncan Gold Medal in Obstetrics.—*Brit. Med. Jour.*

THERE'S THE RUB.

To vaccinate or not? That is the question,
Whether 'tis be'er for man to suffer
The painful pangs and lasting marks of small-pox,
Or to bare arms before the surgeon's lancet,
And, by being vaccinated, end them? Yes,
To feel the tiny point, and say we end
The chance of many a thousand scars,
That flesh is heir to, 'tis a communication
Devoutly to be wished. Ah! soft you now,
The vaccination! Sir, upon your rounds,
Be my poor arms remembered.

—*Puck.*

RUBBER FOOT FEVER.

If a man has a corn, says the *India Rubber World*, it can be removed, but if he is suffering from rubber foot fever, no chiropodist can help him, and the only thing to prescribe is liberal bathing of the feet and removal of the cause. Rubbers should only be worn to keep wet out, and they should be removed the moment the wearer gets indoors. Failure to note this gives a man wet feet in a far worse sense than if he waded through mud ankle deep. It was the trouble resulting from forcing the perspiration to soak the stockings and keep the feet perpetually damp that drove rubber-soled boots out of the market. Even loose rubbers are a source of danger, and the cause of more serious colds than they avert.

THE EFFECT OF FOG ON ACTINIC LIGHT.

A committee of the Field Naturalists Society have ascertained the composition and character of the air in four stations in Manchester and two in Salford. The Committee find that a very marked increase has taken place, both in sulphurous acid and organic matter, especially during the past month. Speaking generally, the district of Ancoats and the centre of the city show the greatest amount of pollution. The amount of light (chiefly actinic) was measured for each day; the difference between town and country became more and more pronounced as the winter months were reached. Fog cut off the actinic light almost completely, the record in the country (free from fog) being for the same day ten to twenty times that in Manchester. The general falling off of light as the season advances was most striking, the amount in October, taking similar days, being little more than one-third that measured for August.—*Brit. Med. Jour.*

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CLINICAL LECTURE.

MULTIPLE NEURITIS.

By PROF. A. FRAENKEL, M. D.
BERLIN, GERMANY.

Gentlemen :—The disease which I will take the pleasure of showing you a few cases of to-day, was recently spoken about in the Society for Internal Medicine by Dr. Senator, and called forth a most animated discussion. Dr. Senator showed two specimens which gave evidence of an especially aggravated affection of the muscles. The same was manifest in a decided hyperæmia of the vessels running between the single muscle bundles, a collection of circular cells around these and the appearace of seed-like growths resulting from "pressure-atrophy" of the muscular fibres. Especially in the second preparation demonstrated by Dr. Senator, the primary symptoms had been pains in the muscles, while evidences of a morbid condition of the nerves, such as pain or pressure or anæsthesia were absent and only appeared at a later stage of the disease. Dr. Senator, therefore, expressed it as his opinion that in a certain class of cases of multiple neuritis, the disease finds its origin in an affection of the muscles, and starts with being confined to the muscles, and that it is only at a later step the nerves are attacked. He is also the opinion that apart from the acute or subacute polyneuritis, there exists also an acute infectious polymyositis.

If we stop a moment to glance at the overwhelming amount of literature which has been published during the past few years on the subject of multiple neuritis, we will find that the increase of knowledge gained is due, primarily, to the greatly increased symptomatic complex, and, secondarily, to our knowledge of the patholo-anatomical change occurring in the disease. The well-known work of Leyden, and later of Duchenne, has enabled us to class those affections formerly termed as acute and sub-acute spinal atrophy and acute and sub-acute anterior spinal paralysis, under the head of mutiple neuritis, and so most recently the effort has and is being made to pay special attention to changes in the central nervous system, and especially in the spinal cord, in cases of multiple neuritis. Leyden in his work, and after him Oppenheim, have not infrequently recorded changes in the gray substance of the cord, which consist in certain alterations in the cells. In some cases hyperæmia of the gray substance and also isolated points of myelitis were found.

All the same it does not seem probable that these changes in the cord were the starting point for the morbid process in the periperal nerves. Of special interest are certain changes in the white substance of the cord which have been frequently observed by recent investigators and to which, lately, more importance has been placed.

The last writer in this field, whose work I have in my hands, is Pal. He claims that these changes of the substance of the cord constitute the principal factor through which we must seek to determine the pathogenesis of multiple neuritis. He cites the history of eight cases in his monograph upon the subject in four of which he obtained *post-mortem* examinations, and in all forms of these he found distinct changes in the substance of the spinal cord. The changes consisted in one case in hyperæmia of the gray substance with capillary hæmorrhages in the posterior and anterior bones; in a second case they consisted in a partial degeneration; in a third case there were also extensive degenerations of the gray substance, both in the cervical and lumbar regions. Pal expresses the opinion that the toxic element in multiple neuritis, may affect different points in the nervous system in succession or simultaneously.

It is interesting to note, in this connection, that the degeneration of the cord is not a general or progressive one, but that it occurs at separate points, often distant from one another.

If such changes are of frequent occurrence in this disease, the symptomatology becomes at once much more complex.

It will be seen that we can have a complication of tabes and multiple neuritis—or a neuro-tabes peripherica. I am reminded of the works of Dejerine and others who have demonstrated a morbid process of the sensory as well as the motor nerves in cases of tabes neuritis, so that in the course of tabes a motor paralysis resulting in subsequent atrophy can occur.

Clinically also is it sometimes difficult for us to determine whether we are dealing with neuritis or tabes. In this respect, I do not refer to the similarity of the more gross symptoms, such as pain, loss of the knee-jerk, paralysis of the optic muscles, but to others, such as bladder troubles, gastric irritability, girdling pains, etc.

I had a case not long since in this clinic, in which there had been gastric trouble for years, but which after the manifestation of the girdling pains about the waist lead to a diagnosis of tabes. Later, however, Dr. Remak was able to detect degenerative atrophy in the forearm and also in the lower extremity, so that the final diagnosis of multiple neuritis was reached. We come now to a demonstration of the cases. I will begin with those cases that ended fatally, the results of these autopsies I have here.

Case 1. The patient from whom I obtained this microscopical section, is interesting to us on account of peculiar changes, which have been recently observed in other cases of multiple neuritis, to which Korsakoff first called attention. These are seen most frequently in cases of alcoholic neuritis, and especially in the infectious forms of neuritis. They are also observed in neuritis consecutive to ileo-typhus, and in those forms of neuritis in which toxic substances are taken up in the organism, as after abortion, etc.

This complication is remarkable for the following symptoms:

In one series of cases there will be a manifest weakness of the psychical sphere; the patients are sleepless, easily excited and put out of sorts. In a second series of cases there is a want of collectiveness and consistency regarding time and place, and a sense of confusion. In a third series, the patients will show great forgetfulness, they can under certain circumstances answer promptly and coherently, and then again will show absolute ignorance of most recent occurrences.

Korsakoff states that this complication so completely masks the symptomalogical picture of multiple neuritis as to render a correct diagnosis most difficult. Besides these symptoms the patient is usually greatly emaciated, has an uneven, quick pulse, and suffers from persistent vomiting. All these symptoms were present in the case I have just demonstrated.

Case 2. The patient was 50 years of age, who had the year previously been admitted, on November 26th, to the City Hospital of Berlin, located at Urban. The disease had begun on about the middle of August with pains in the limbs; eight days later he could not walk, and six weeks before his admission to the hospital physical disturbances had begun to manifest themselves—he became confused, and there was an inability to keep his mind fixed upon any certain subject.

Upon examination a high degree of amnesia was observed, he had forgotten things which occurred but recently, he did not know where he was, and, coupled with these psychic disturbances were all the symptoms of a well-developed case of multiple neuritis. According to his wife, the patient was a pretty hard drinker, and in former years there seems to have been some syphilitic affection. There was a high degree of weakness in the lower extremities, the knee could be only slightly bent, and there was a decided diminution of the sensibility of the limbs. The reflexes were absent, with the exception of a very slight reflexes of the sole of the foot; knee-jerk was absent, the nerve roots were very painful upon pressure.

In the upper extremities there was a marked atrophy of the extensors of the forearm and of the small muscles of the hand. The weakness of the limbs—especially of the upper extremities—increased materially. The patient became weaker and weaker, and soon went into a condition of violent delirium and gradually sank under manifestations of profound prostration. On the last day of his life his pulse was 120, respiration 48, and temperature 38.70° C.

The autopsy, apart from a flabby heart, showed but few microscopical changes. Even the nerves, as far as the naked eye was concerned, showed no morbid changes. The following nerves were examined microscopically: the crural, perineal, ulnar and radial, and show from their roots to their endings a high degree of degeneration—seen principally in a degenerative loss of the white substance of Schwann. The muscular substance was but little changed. The cord was intact. The brain showed no marked pathological changes.

Case 3. This case is that of boy, 14 years old, who came to the hospital on August 12,

last year. As you see, in this patient there has been a gradual but unusual degree of polysarcia, not only of the extremities but of the trunk, so that any one of you who now see him for the first time, might well imagine, on account of the general condition of the muscular tissue, that we are dealing with a case of Erb's progressive muscular dystrophia. At the time of his admission to the hospital the maximum circumference of the calf of the leg was 24½ centimetres, and since being here there has been an increase of 10 centimetres. The circumference of the thigh has also increased 5 centimetres. The patient cannot ascend a step without assistance. There is a comparatively well-marked lordosis in the region of the lumbar vertebræ, similarly as in cases of dystrophia of the muscles. When seated in a chair and asked to rise without making use of his left or sound arm, he is unable to do so on account of the extreme paretic condition of the muscles of the back—in this peculiarity we see a similarity to pseudohypertrophy of the muscles. You see also the stone-like appearance of the calf as in case of pseudohypertrophy of the muscles. But we are not dealing with this disease in this case, which is one of multiple neuritis.

The right arm is entirely paralyzed, the only movement possible being a weak contraction of the fourth and fifth fingers, while the muscular atrophy of the arms is greatly hidden by the large amount of fat; still that of the deltoids is plainly to be seen, especially when the arms are held horizontally. The gait of the patient is very peculiar. In consequence of the great weakness of the extensors and flexors of the foot he does not walk normally, but rotates his legs outwardly, and in bringing each leg forward describes half a circle, and walks with his feet far apart. This peculiar gait is associated not only with a weakness of the muscles of the feet but also with a weakness of the psoas muscles.

The patient says that the disease was originally caused by working in the wet. He was compelled to stand for a long time in water, and felt ill immediately afterwards, and was compelled to go to bed. In a few days he felt a tingling sensation in his right arm, and two days later was unable to move it. After lying in bed for twelve days, he endeavored to get up, but fell to the floor immediately. At the hospital we found a complete paralysis of the right arm, and a weakness of the left, especially in the shoulder, and also a decided diminution of the motor power of both the lower extremities. In the left upper extremity, the elbow could be moved pretty freely, and the hand and fingers could be stretched and bent, but supination was most difficult. Triceps reflex was entirely absent from the right arm, and only very slightly present in the left. Patellar reflexes absent in both limbs, also foot reflex absent. Both flexion and extension of both feet almost entirely impossible; in the left leg the knee and hip-joint could only be slightly bent.

What was most striking in the case was the intense painfulness of the muscles, and also of nearly all the nerve trunks, so much so that the patient would cry aloud if touched even most gently Even the skin was exquisitely sensitive. While the tactile sense was normal, there were also intense spontaneous pains in the muscles, especially when the fingers were moved, also paræsthesia in the form of tingling and creeping sensations in the lower extremities. The pupils were equal and reacted normally to the light. Temperature normal. Pulse fluctuates between 68 and 76.

The patient is being treated with faradism in connection with a constitutional treatment. When admitted to the hospital he weighed 29.5 kilogrammes, and now, after a year's sojourn here, weighs 52 kg., his gain being 22.5 kg. This enormous polysarcia, caused by the long confinement in bed, coupled with a very rich diet, completely hides the atrophy of the muscles. The prognosis of a restoration of the paralyzed parts is poor. The boy is, however, learning to write with his left hand.

Case 4. This case shows better results in the amelioration of the paralysis. The patient is a driver, 29 years old, who had a most severe attack of tubercular neuritis. The patient was twice in this institution, first in October of 1890, during which time he was treated for pulmonary catarrh. Two months after his discharge (which was in December), he returned again, but this time with a totally different condition: Both upper extremities were entirely paralyzed, and the lower extremities paretic in a high degree, so that they could hardly be lifted from the bed. There was a slight paresis of the facial muscles, hoarseness in consequence of a paralysis of the left vocal cord. Further, great painfulness of the muscles, as well as painfulness of the nerve trunks. Patellar reflex but very slight. The patient has a good deal of spontaneous pain, and could not sit up. Under a careful nutritive therapy these symptoms gradually abated, although the phthisis from which the patient was also suffering in no way improved. As the paralysis lessened he had frequent attacks of hæmoptysis. There now only remains a weakness of

the hands, especially of the extensors. The physical condition of the patient has also improved.

COLLES FRACTURE. — BURSITIS OF WRIST. — RICE-GRAIN BODIES. — SCIATIC NERVE-STRETCHING.

By ROSWELL PARK, M. D.
BUFFALO, N. Y.

Gentlemen: I have brought this case before you in order to illustrate some of the untoward results of fractures. This woman is 52 years old and she tells me that ten weeks ago she fell and hurt her wrist, which swelled somewhat during the night. The next morning she consulted a physician who diagnosed a fracture of the fore-arm, put on a long anterior splint, and told her that it would "come out all right." Ordinarily fractures in which the lower end of the ulna or radius is involved, result from falling upon the palm of the hand with the arm and hand extended to save one's self. In this particular instance, however, the fall was upon the back of the wrist and the lower end of the ulna while the hand was flexed and pronated.

As I hold her hands up symmetrically, you notice a marked difference in the contour of the two wrists. I cannot rotate the injured hand outward as much as I can the other. There is not much alteration in the appearance of the radial side of the wrist, but from a palpable thickening of the lower end of the radius, I infer that the patient had at the time a Colles fracture. As my predecessor in this school, Dr. E. M. Moore, so earnestly and so eloquently taught, the most important lesion of a Colles' fracture is often the complication of displacement or even fracture of the ulna. Occasionally the internal lateral ligament is perforated by the styloid process of the ulna and this process may even be broken off by the violence. Occasionally we have a compound dislocation of the ulna, compound in the sense that the styloid process, after perforating the internal lateral ligament, perforates the skin also. Usually when there is trouble with the ulna as well as the radius, the damage is rather on the dorsal aspect of the wrist than in front. Whether there was fracture of the ulna in this case I do not know, but there is no nonunion at present. I take it that, instead of being fractured, the ulna was dislocated forward, and whether the dislocation was reduced at the same time that the fracture of the radius was dressed I do not know, but now I find a condition of subluxation of the lower end of the ulna in combination with a good deal of thickening and callus formation about the lower end of the radius and sufficient binding of the bones to prevent much rotation of the forearm. Flexion of the fingers and movement of the thumb are much interfered with by adhesions of the tendons within the tendon-sheaths. These adhesions have followed a tendo-vaginitis at the point where the sheaths pass in front of or behind the parts most injured.

There is enough in this case for a whole morning's lecture. Unfortunately I have not time for that, but I show you the case hastily, first, because it illustrates the result of some of the complications of Colles fracture, secondly, as a text for further discourse on the proper treatment of such cases, and thirdly, that we may consider what can be done at present for the relief of the patient.

Our worst results after Colles fracture are encountered in patients of advanced age rather than in early life, and persons of the age and build of this woman are, unfortunately, predisposed to the formation of fibrinous exudates which are thrown out easily and absorbed with difficulty. Questioning her with regard to rheumatism, I find no history of anything more than considerable pain in the left shoulder and she has never had any acute attack. A person with the rheumatic diathesis, who has had in the past an acute attack of the disease, is much more liable to have involvement of the tendon sheaths following an injury of this kind than are persons without the diathesis.

What can be done to relieve the existing state of affairs? If the patient were quite young and vigorous I should advise anæsthesia and forcible flexion and extension, and perhaps efforts to restore the ulna to its place and hold it there. But ten weeks have now elapsed since the accident and the patient through in ordinary health, is neither young nor vigorous, and there is not enough prospect of success with that form of treatment to make me feel like urging it upon her. A more serious and more radical but more hopeful operative procedure would be to resect the lower end of the ulna so as to render greater movements of the wrist possible. The patient hesitates about undergoing any operation, however, and I have advised her therefore to wait a while, to soak the hand and fore-arm twice daily in water as hot as she can bear it, and to follow this with various mainpulations of the fingers and wrist for half an hour. The patient says she has rubbed the hand, but on questioning her about the

movements she has used, it becomes evident that her manipulation has been of a very superficial and unsatisfactory kind which might serve to relieve itching or numbness, but which would have no effect on the deep tissues. If it were practicable, I would advise manipulation by a skilled masseur, but on account of her means it will be necessary to teach her how to make the necessary movements herself, and I will, therefore, demonstrate them to her and to you at the same time. Beginning at the end of each finger a combination of pinching, kneading and rubbing should be carried out, moving toward the wrist. Four or five minutes should be spent on each finger and at least as much time on the palm and back of the hand, and five minutes more about the wrist. The same manipulation, with greater amplitude, should be practiced on the forearm. She should also try to make movements of pronation and supination. I have advised her to carry out this plan of treatment faithfully for three or four weeks, and if in that way she gets motion enough to satisfy her, there is no reason why I should not be satisfied. On the other hand, if she does not receive the prehensile power of the hand, or if she wishes a more movable hand and forearm than can be obtained by the manipulations which I have suggested, then she can return to the hospital and I will remove the lower end of the ulna and, at the same time she is under the anæsthetic, break up the adhesions in the tendon-sheaths.

BURSITIS OF WRIST—RICE GRAIN BODIES.

The next case is another illustration of injury to the right wrist, but of an entirely different character. The patient is a girl 18 years old, who four years ago fell in the classical way while skating. She broke no bones and was not much disabled at the time, sustaining simply a sprain of the wrist. Three or four months later, however, she began to suffer from pain, weakness and loss of function, and she is now totally incapacitated for her work, that of stenographer.

The circumference of the affected wrist has for three years been greater than that of the other. I find the enlargement to be due to a fluctuating swelling on the anterior surface of the wrist extending upward from the annular ligament. There is also thickening in the palm of the hand. A case similar in many respects to this you saw some days ago in the person of a young man with a tubercular gumma of the arm and a swelling above and below the annular ligament. The gumma was completely excised, the swelling opened exposing freely the bursæ in the palm of the hand and under and above the anterior annular ligament. A quantity of glairy fluid was permitted to escape and the parts were then sewed up carefully. That patient recovered good use of the fingers, but as the case was markedly tubercular, there being a family history of consumption and the patient in fact having incipient phthisis, the general prognosis was not favorable.

In this girl's case, however, there is no family history of tuberculosis, and her general health is excellent. We have the same anatomical condition, dropsy of the synovial bursa about the wrist, but without the tubercular element. As I palpate this swelling there is a sensation of thickened fluid and I fancy that I distinguish in it rice-grain bodies which I have already described and shown to you in similar cases. It is difficult to account for them, and to my mind the only tenable hypothesis of their origin is that a sero-fibrinous exudate is thrown out which precipitates and forms little masses of lymph that are rounded off by friction until their appearance suggests grains of rice from which they have been named.

As I hold up the patient's wrist, you see a very marked protuberance and as I press above the annular ligament, there is a bulging out of the palm of the hand. There is a continuous bursa with a constriction where the annular ligament overrides it, and as I press the contents backward and forward I get the sense as of something—in all probability some larger fibrinous concretion—slipping through beneath the ligament.

In cases of this nature special care must be observed in regard to maintaining asepsis. A longitudinal incision is made in the middle line of the wrist anteriorly and the dissection carried down to a white glistening protuberance which constitutes the wall of the enlarged bursa. As I open into this a quantity of the little rice-grain bodies protrude in a mass, and by pressing on the palm and pulling at the collection with forceps I remove many more ; I can see others still adherent to to the walls of the cavity. I will therefore expose the exterior of the sac more clearly by enlarging the opening, and as an additional aid I will make an exploratory incision into the bursa through the palm of the hand. I dissect away as far as possible the living membrane of the sac, and the rice-grain bodies adherent to it. After irrigating the cavity with a bichloride solution, I close the opening in the wrist with a continuous catgut suture and apply an external antiseptic dressing in the usual manner. (This patient made a perfect recovery.)

NERVE-STRETCHING FOR SCIATICA.

This is the man whom you saw a week ago when I stretched the great sciatic nerve for sciatica. The patient says he has suffered no pain whatever except a little soreness for an hour or two after the operation. He walks easily. We cannot consider the present state of the patient to be a final test of the success of the operation, but he suffered less pain when he regained consciousness from the effects of the ether than he had for some time previous to the operation, and from past experience we may be reasonably sure that he will not have an immediate return of the trouble; so that, whatever the outcome in a year or two, I am sure he will consider that the operation has been to his advantage. I know of no other treatment, medical or surgical, which gives the amount of relief from pain of chronic idiopathic sciatica which the operation of nerve-stretching affords.

THE DUPARCQUE PRIZE.

The *Gazette des hôpitaux* announces that this prize for 1893, amounting to 1,500 francs and a gold medal of the value of 100 francs, is offered by the *Societe de medecine*, of Paris, for the best essay, written or printed, appearing during the year 1891 or 1892, on any subjected connected with tuberculosis. Essays should be sent to the secretary, No. 3 rue de l'Abbaye, Paris, before December 31.

CAPILLARY BRONCHITIS.

Dembitz recommends apomorphine as an expectorant for infants, instead of ipecac. His formula of administration is:

℞ Apomorphini muriat..... r. ⅛ to ½.
Aquæ destil.....f ʒ iv.
Acid. hydrochlorat.....gtt. v.
Syrup. simplis.....f ʒ i
M. Sig. ʒ i every two hours.

Collapse need not be feared, and the apomorphia disturbs digestion less than ipecac. He considers musk the respiratory stimulant *par excellence*. He does not allow the infant to sleep too long at one time, or to lie a length of time in the same position.

If crying makes them cough sometimes, it is all the better. The child should be carried about and its position frequently changed, in order that the secretions may be given less opportunity to settle down and occlude any one part of the smaller tubes. Much mucus may be expelled in producing increased movement of the chest-walls by means of pressure applied to the chest, like artificial respiration.—*Virginia Medical Monthly.*

COMMUNICATIONS.

A FEW OBSERVATIONS ON DISEASES WHICH IMPLICATE THE HIP, KNEE AND ANKLE JOINTS DURING CHILDHOOD.*

By THOMAS H. MANLEY, M. D.,
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The study of the diseases of the joints has always been full of interest to the observing and progressive student of the healing art; and, when one views the field and notes the vacillating notions from one generation to another which have prevailed with regard to their ætiology, and the varying therapeutic measures resorted to for their relief, our interest is increased, though we must confess that our knowledge of them is not proportionally extended.

Physics and chemistry have placed at our command facilities for accurate observation; yet even among those having the most extensive scope for clinical study, there is nothing like a unanimity of opinion, either with respect to the fundamental causation or most appropriate therapy in those joint lesions so common in children. Hence, among many, the old-timed liniments, salves and lotions, still hold their own; the bandage, splint and weight fixation.

The hip-joint is the deepest lodged and most powerful in the body. The knee-joint has the most extensive ligamentous and tendinous connections, and, for its great size, is the most exposed. The ankle-joint, like the knee, derives its main support from the tendons, which serve as stays. The whole weight of the body, in locomotion, is borne alternately by this articulation. The overlying and subjacent structures play an important rôle in joint disease; it is necessary that they be considered before their pathology is entered into.

In a general way a joint consists of bone, cartilage, synovial membrane, muscles, tendons and ligaments.

Large blood-trunks and nerves of great size pass immediately, posteriorly and anteriorly, to the articulation of the hip and knee. The head of the femur in the cotyloid cavity, is largely supported by and buried under an immense mass of muscular tissue. From the point at which the muscles taper into sinews, the tendons to their inser-

* Read before the Harlem Medical Association January 6, 1892. Dr. M. C. O'Brian, President.

tion into their periosteal attachments, are enclosed in thin, elastic, delicate sheaths, which are designated thecæ. Bursæ, of various size, lie along the tendons.

The epiphyseal ends of the long bones, those parts of the shaft which enter into the formation of the joints in the growing child, are soft, spongy and highly vascular. Recent investigations demonstrate beyond a doubt that minute lymph channels freely penetrate into the cancellous tissue of growing bone. The joints are freely supplied by nerves. As the growth of all shafts of bone is from their ends, their vascular feeders at these points are large and abundant.

Having outlined a few of the gross structures and anatomical elements, the various pathological mutations, of which the joints are the seat, may now be more easily defined and readily comprehended.

We have seen that the joints are passive in function, simply serving a mechanical purpose, as the lungs do one which is chemical, but that they are, on the contrary, acted *upon*.

The three great systems—the vascular, nervous and osseous—are active factors in these maladies. Immobilization, mechanical rest, massage, electricity and exercise, religious invocations, intra-dermic, hypodermic and intra-articular injection of medicated solutions; direct dieting and constitutional remedies; surgical intervention, either palliative or radical; the simple puncture or incision, to the complete sweeping away of the entire joint, have each and all their votaries and partisans.

Thus, we see, swayed by diverse and dissimilar theories—one appealing to psychological influences; another to constitutional measures; another to absolute, enforced rest of the limb; and another to moderate motion, or local stimulation, biding time for arrest of the disease. One class, and until very recently the most numerous, regarded tubercular or scrofulous disease of the articulations, as infectious or incurable, and demanding radical and extreme measures for its relief.

In this conflict of opinion and practice, it is quite evident that anything but a common ground has been reached. We must be largely guided by our own judgment, and in each given case examine minutely into its pathology, then adopting such a therapy as will most rapidly and safely lead to a restoration of healthy function in the articulation or its adjacent structures, a brief consideration of which is here undertaken.

Diseases of the joints are functional or organic, acute or chronic. They are nervous, osseous, arthritic, osteo-arthritic, synovial or muscular in origin.

The best known authors on pathology recognize constitutional causes as the predominating in joint diseases, though there are a few who stoutly maintain that morbid processes in the articulations are often attributable to local injury or traumatic influence, besides those who allege that in tubercular diseases of bone, the bacteria are alone responsible. There are many varieties of arthritic and synovial inflammation which are associated with, or dependent upon, acute febrile diseases, such as rheumatism, scarlet fever, and others. There are other phases of joint incapacity, which seem to be chiefly neurotic in character. And there are cases of restricted motion with incipient degenerative changes in the overlying parts wherein there is actually no morbid process whatever going on within the synovial capsules. It has been conclusively demonstrated that there are separate and well defined motor centres in the brain located on the cortex. It is claimed that they preside over distinct and limited areas of the body.

Disturbances of the normal processes in the cerebro-spinal axis, congenital or acquired, may manifest themselves externally by the non-development, distortion, and wasting of a limb. The long fixed, overstrained state of the extensor muscles, with trophic annoyance will in time result in total loss of function. In all those of chronic spasm of flexor, rotator, or aductor muscles, of a congenital origin, there is associated with it clear evidence of mental deficiency or perversion. This class of cases should scarcely be grouped with joint diseases *ab initio*, but as the deformity resulting is most apparent in the articulations and the joint's utility destroyed, I have thought well to direct attention to it, as a condition whose pathological dependence is remotely situated.

There are many varieties of joint affections which are associated with constitutional disturbances; some of a transient and others of a chronic character.

These diseases may be divided into acute inflammatory and chronic, or diathetic. Among the former we find that in "La Grippe," or influenza, at the outset of an acute attack, very often the knee-joints are painfully sensitive; in acute inflammatory rheumatism (we include that disease which is pathologically characterized by always attacking the fibro-serous structures in the beginning, and thence spreading to contiguous parts), also, cerebro-spinal meningitis, when the disease manifests signs of abatement all the joints of the body are exquisitely sensi-

tive. The exanthematous fevers in childhood are occasionally followed by arthritic diseases.

Among the chronic affections with which articular disease is intimately connected are gout, scrofula, syphilis, and malaria.

Besides constitutional maladies, the health and movement of a joint may be seriously jeopardized by local pathological changes along the muscle planes, the nerves, and blood-trunks, the shafts of bones, and cellular membrane which supports and encloses it. Local changes in the parts which lie between the hip and knee, the knee and the tibio-tarsal articulation or beyond this point induce a partial loss of joint action, and give an impression to the inexperienced that the articulation itself is implicated, while, as a matter of fact, its elements are wholly free from organic change.

These pathological changes in the extra-articulator structures depend either on alterations induced by injury or local diseased conditions. Thus we may witness impaired motion or strength in a joint in close proximity to, or remote from, a fracture. Pressure, laceration, or rupture of nerve, muscular, or vascular tissue gives rise to inflammation in the cellular tissues, to spasm, neuralgia, or paralysis of the muscles supplied by the injured nerve. In periostitis, inflammatory action is propagated outwards by the lymphatics, and efferent vessels to the inter-muscular spaces, and a free plastic exudate is widely diffused in every direction. When this is completely absorbed impediment to motion does not follow; but, if it be in great amount, and becomes organized, the easy, gliding movement of the muscle is interfered with by extensive bands varying in size, direction, and consistency.

Neuralgia, anæsthesia, or hyperæsthesia may extend into a joint by transmission through a contused, torn, or inflamed nerve, or its neurilemma.

So complex and important are the various pathological changes of a constitutional nature located along the shafts of bones, in what may be designated inter-articular spaces, that to enter into each in detail is beyond the scope of my essay. He who is not fully acquainted with them, their precise nature, their histological and molecular composition, and ceaseless changes, with their influence on the nutrition and development of disease of arthritic structures is not qualified to deal with many conditions about the articulations, which, if thoughtlessly or unskillfully treated, will lead to atrophy, to a crippled state, or even loss of a limb.

MALADIES INVOLVING THE HIP-JOINT.

The hip-joint, although the best protected and deepest lodged in the body, in early life is more often the seat of functional and organic disease than any other in the lower extremity. The majority of the affections which interfere with function of this articulation are trivial or temporary, such, for instance, as rheumatism, neuralgia, or idiopathic inter-muscular inflammation of an evanescent character. From traumatisms arise contusions, moderate cellulitis, or synovitis.

In strumous children tubercular disease in this joint occasionally works great havoc, attacking in varying degrees the osseous, arthritic, and synovial tissues, and ending in serious cases, in distortion, anchylosis, shortening of the limb, or even the loss of life.

For a long time it has been well known that there was a close clinical and pathological affinity between ulcerative disease in the joints and pulmonary phthisis, but not until recently has it been definitely determined by the microscope that the pathogenic germ of each is identical. It was supposed that the relation between pulmonary and strumous disease in the joints having been established, hereafter our therapeutic resources would be extended, and we would proceed to treat joint diseases by precise and scientific methods. Accordingly, there has been no end to the theories which have been wrought to explain the pathology of this mysterious disease, and plans of treatment for its arrest or extinction. Its heredity had been denied. It was said to be infectious and contagious. Some alleged that it was disseminated by the lymphatics; others, by the vascular system; that it might enter the system through any of the various orifices in the body—the mouth, rectum, urethra, or vagina,—through the atmosphere, ingesta, or semen, through an abrasion in the integuments or mucous membranes, and even through the placental circulation to the fœtus.

Hence, a tubercular disease in glandular or other tissue, when accessible to the scalpel, the gouge, or cautery, was eagerly sought and swept away. The discovery of the tubercular bacillus, and the new therapy which was invoked to meet it, gave an immense impetus to operative surgery, and enormously swelled the number of cases demanding surgical intervention. In fact, tubercular disease of nearly every organ except the lung came to be regarded as no longer a malady to be managed by the physician, but belonging exclusively to the surgeon.

After all, the main question has not yet been answered, and many of the allegations of modern enthusiastic investigators rest on

such unstable deductions that we are, in this regard, at present, in a state of great uncertainty.

No one has yet demonstrated to us why tuberculosis manifests a special predilection for the lymphatics of the neck and the osseous system in childhood, and the pulmonary parenchyma in the adults.

It is a great mistake to assume that every phase of tubercular invasion of any of the structures going to make up the articulation at the hip, is "hip-joint disease." In medical nomenclature the term is often vague and meaningless, but to the laity of serious import. Now, if we proceed, when we are assured that our little patient has tubercular implication at the hip, with active, or misdirected, mechanical treatment, we may induce a condition as bad or worse than the one we are endeavoring to prevent, and may cripple our patient for the remainder of his life.

Tubercular disease may manifest itself in the anatomical elements of the hip-joint, in manifold phases, as it does in the pulmonary organs. The invasion may be confined to a very limited area, never passing from the inflammatory to the ulcerative stage, and giving rise to little, if any, inconvenience. In fact, it may be entirely painless. In a second class of cases, the synovial capsule alone is involved, and so we will have an effusion. This, as in the preceding phase, undergoing resolution, the effused fluid being absorbed and function regained.

With the third class, the disease is serious. Here we will have participation of the osseous and cartilaginous elements, the perichondrium and periosteum. It will generally be noted with this group that from the very onset the nutritive processes are at a low state and the system is saturated with tubercle. Here the germ action gives rise to a low grade of diffuse inflammation which indiscriminately involves all the tissues, but is specially destructive to the epiphyseal ends of the bone. The inflammatory action is but feebly resisted by vital processes and in a short time takes in ulcerative changes, reducing the tissues to a caseous, pulpy, or fluid consistence. Now, the ultimate outcome with these cases will depend on the patient's inherent resisting power, surroundings and treatment.

The best that we can accomplish when the disease takes on these great changes, is to arrest it or modify its violence, as we cannot restore what it has already destroyed. As the fluid which accumulates in these cases is not septic and if not found in too great quantities may be absorbed with impunity, unless it is in close contact with necrosed bone, and is disposed to infiltrate healthy tissues, it should be left undisturbed within its capsule.

In that class of cases of the tubercular invasion at the ileo-femoral articulation in which the area involved is limited, the symptoms announcing its advent will vary in duration according to the situation and the structures which are implicated will depend on the amount of resistance which it encounters, or whether congestion runs into inflammation or inflammation into ulceration. When the periosteum is the part primarily invaded, pain is always present and of an aggravated description. Should the original diseased focus lie along the muscle sheath and outside of the capsule, not infrequently an abscess will form that may either impede absorption or, in time, point and break. With final collapse of its walls and the cessation of suppuration, the full functional use of the joint will be rapidly regained. In the second class of tubercular affection at the hip, the synovial membrane and the fibro-cartilaginous structures are the principal seat of pathological changes. The synovial fluid may be secreted in such quantities as to induce pressure on contiguous vessels; hence, seriously interfere with the nutrition, principally of the arthritic and osteo-arthritic structures. When synovial inflammation of this description fails to undergo resolution, the accumulated fluid may take on molecular changes of a chemical or bacterial character.

In mild types of tubercular synovitis in a well-fed, vigorous subject, there is no reason to assume that it is not amenable solely to appropriate constitutional and local remedies.

The third and last type of tuberculosis involving the hip, that which usually terminates in necrosis, anchylosis, or spontaneous dislocation, considerable shortening of the limb may occur. Death of the patient is seldom or never encountered, except in those of a pronounced inherited strumous cachexia, or acquired through degenerating influences, as bad air, non-nutritious and insufficient diet. With patients of this description, the advance of tuberculous changes is usually rapid and destructive. It seldom abates until some important anatomical structure has been seriously compromised, the head of the bone being often destroyed, the osseous floor of the cotyloid-cavity is occupied by caries, and the perichondrium, cartilage and ligaments having undergone partial or extensive disorganization. While these changes have been advancing in the anatomical elements of the joints in consequence of the enormous cellular hyperplasia which is pro-

pagated from the fibrous elements at the articulation, the cellular tissues and circumjacent structures, present a tumid, swollen appearance. The weakened walls of the main venous trunks, either from pressure or want of elasticity, give rise to stasis in the capillary circulation, so that a sort of inflammatory œdema is always noticed in severe cases.

Through the free plastic exudate, so freely thrown out and partly organized in the intermuscular spaces, and the prolonged inactive state of the limb, the muscle-sheaths fuse together. The contained muscle atrophies, contracts, or if forcibly restrained from action over a very protracted period of time, will undergo fatty, or fibrous interstitial degeneration.

The nerve-cylinders, like the arterial walls which pass in close proximity to the femoral head, manifest great resisting power and, except as a consequence of considerable pressure or tension, escape morbid changes.

The lymphatic glands form the entire lower extremity and the ileo-femoral articulation are drained through two systems of absorbent vessels; the peripheral and the deep. In superficial, tubercular implication at the hip, none but the superficial inguinal glands will become turgescent and greatly enlarged; but when the osteo-arthritic elements are involved, both the inguinal and the deep pelvic, mesenteric and retro-peritoneal glands, through septic infection carried along their lower lymph-channels, are greatly increased in volume, either by an inflammatory exudate into their stroma or by hypertrophic changes in the cellular elements, and great increase in their intercellular structure.

As a result of long-continued pain and exhaustic drain on the economy in hip-joint tuberculosis, or the same pathological process in any other of the major articulations, unless the system is well fortified and correct treatment is instituted, the internal organs will in time present signs of participation, particularly the kidney, by waxy degeneration.

Does tuberculous disease involving the coxo-femoral articulation or other joints arise from morbid changes *de novo* in the anatomical elements called into activity by certain constitutional or local conditiens, or does it depend on a certain specific infection, the germs of which gaining direct access through the ingesta or otherwise, and carried to that part in which morbid phenomena first makes their appearance?

If the theory of the contagiousness of tuberculosis rests on a substantial basis which has been irrefutably demonstrated, then we must answer that this osteo-arthritic disease always originates solely through an acquired contagion, the virulence of which is spent in early life on the articular structures.

It will be most commonly found that the subjects of tubercular disease in the joints inherit a strumous diathesis, have a frail constitution and, though frequently large eaters, they poorly assimilate their food.

Although, perhaps, the most serious and rebellious types of joint disease may be found among little children, crowded together and badly fed, yet it is of frequent occurrence among the opulent and in the most isolated sections of the country. Moreover, we seldom see children from parents who have lingered for months or years in their homes before they died of tubercular consumption. It may be said that the outbreak of this disease in the articulations arises from a local impression on a general condition; that certain children of a strumous diathesis may, after any of the exanthematous diseases, an injury, or after a severe synovitis or arthritis arising from cold which will fail to resolve, fall victims to tubercular disease in a joint.

In tubercular affections of the hip, or other joints, is there danger of the bacilli being taken up by blood vessels or lymph channels and being disseminated through the system, and carried to distant internal organs, as the lungs, the brain, or the kidney? If the disease appears first locally, with a tendency to a general diffusion, then, certainly, its early and thorough eradication is imperative. But there is no proof that visceral implication ever follows, as a secondary event, when a joint is diseased. On the contrary, it is alleged by some that when there are symptoms of tubercular invasion of the pulmonary parenchyma, and a tuberculous mass of bone or broken-down tissue is removed by complete excision, the pulmonary malady takes on a cumulative phase, gathers renewed violence, and promptly ends in the loss of life.

During the acute stages of tubercular disease in the hip-joint there are many pathological phenomena present in varying degrees which require an intimate knowledge of them if we would intelligently direct such measures of relief as will be attended with the greatest and most enduring benefit.

We will notice that in every case of tubercular disease at the hip-joint, regardless of whether there be loss of bone or dislocation, when the limb has been long immobilized, there will be more or less shortening. In other words, when, in the treatment of any morbid condition at the hip-joint, a fixation-apparatus is adjusted which permanently im-

mobilizes the growing limb, the enforced inaction and pressure of bandages or straps on the large blood-trunks will cause an arrest of development, or at least so retard normal growth that when the arthritic disease has come to a halt it will be found that the limb on the affected side will be wanting considerably in length when compared with its fellow on the other side of the body.

When the disease has been so destructive as to cause the disorganization of the *ligamentum teres* and the capsule, we will have dislocation of the head of the femur on the dorsum of the ileum, the acetabulum becoming obliterated, a new hollow for the dislodged bone being provided.

When the disease has passed from the inflammatory into the ulcerative stage, and its violence has been spent mainly on the cancellous or compact elements, the necrosed bone, if not removed by surgical intervention, may undergo a gradual disintegration, the non-septic fluid, fatty and albuminoid elements, being taken up by the absorbents and the residue as sequestra and fragments making their way through the soft parts, through cloacæ in the new periosteal wall or sinuses, which will remain open until all of morbid material is thrown off.

[To be continued in the next issue.]

THE NECESSITY OF SURGICAL KNOWLEDGE IN GENERAL PRACTICE.*

By R. J. JENKINS, M. D.,
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In the exigencies of an active general practice in country districts, the general practitioner is often confronted with surgical injuries obliging him to render whatever assistance and resources may be available for the relief of suffering and the saving of life.

Such occasions bring to the test the poise of mind and practical character of the physician; and his reputation at such times may be weighed in the balance, and turned fortunately in his favor or unhappily against him.

It is in the experience of every practitioner to meet with surgical injuries requiring immediate attention, and sometimes in order to succeed in bringing needed relief, it is necessary that the medical attendant should be possessed of the most consummate knowledge and skill.

A large majority of the injuries occurring in the practice of the country doctor are so severe, and attended by so much danger, that the arrival of a specialist from a distant metropolis cannot be awaited; and whatever is done under such circumstances to lessen human suffering and to insure life can only come at the hands and good sense of the well-equipped, general practitioner.

The casualties occurring in a busy country practice have so often brought me face to face with living surgical problems. I trust a reference to some of them which I may be able to recall might possibly be of benefit to some of the younger members of our profession who are engaged in the general practice of medicine.

In a village about twenty miles distance from this place I practiced medicine for fifteen years, and many mishaps occurred to the people of that community in that time, and inasmuch as there were three stone quarries near by, in which many men were employed, and where such destructive explosives as dynamite are used, it can be conceived that many accidents would necessarily occur requiring prompt surgical relief.

In support of the proposition that gives this paper its title, I will briefly refer to only a limited number of surgical cases coming under my care as a general practitioner.

Twice in those years major operations were performed by myself, the necessity of which was caused by premature explosions of dynamite.

One case was the amputation of thigh at junction of the middle with its upper third; the other of the hand.

Both patients made a fair recovery, except that necrosis of the end of the femur occurred in the patient who had leg removed, which might have been avoided had the operator been more familiar with the details of the operation—and the patient would have certainly lived if his medical attendant had possessed the knowledge—making him see the danger in delaying the resection of the diseased bone, which was not done until the patient was overwhelmed with septicæmia.

Among the many remarkable injuries demanding my assistance in that time was a gunshot-wound of the elbow, penetrating the joint, passing through the capsule and up beneath the periosteum, making its exit near the shoulder-joint.

The arm was removed in this case and the boy made a complete recovery.

Four cases of emphysema (who like the woman in the Scripture had suffered much at the hands of the physician) were effectually

* Read before the Mitchell District Society, December 18, 1891.

aspirated, and all save one was restored to moderate health.

A cause for regret with me lies in the fact that I did three craniotomies on living children, the urgency of which was demanded by small pelvis and exhaustion of parturient females.

Taking a retrospect of these bloody transactions amounting almost to tragedies, how much better it might have been should I have known how to do Cæsarean section.

Other cases requiring immediate attention and depending on me, a general practitioner, were three cases of hydrocele, with acute perichorditis, and as one man died in that vicinity from the effects of a paracentitis scrotalis performed by a surgeon of some reputation in a neighboring city, it is easy to see how that circumstance militated against the operation, and with what trepidation I undertook the performance of such a plain duty.

The question of time is all-important in cases which from this severity demands immediate attention.

Procrastination is the most common element of danger; there could be no proper excuse for not being able to evacuate the bladder of a parturient female, which if not done might cause a rupture of that viscus during the severe pains of labor; yet, I once heard related by a professor to a class of medical students, that he was called twenty miles in the country to relieve the patient of a reputable physician in this condition.

No doctor, therefore, should be unprepared for a duty of this kind; a good medium size aseptic catheter should have a place in the pocket case of every physician, and he should become so expert in its use that he could introduce it with facility and without pain; and it should not be necessary to uncover a female whenever in such cases it must be used.

Other cases requiring immediate attention on the part of the family physician, and to which he should bring his knowledge of surgery, are: gun-shot and incised wounds of the viscera of the body, especially wounds of the abdomen; strangulated hernia and intussusception or internal strangulation of the bowels, also come under this head; and are so grave in their nature as to hold out no prospect for life, only when vigorous surgery is done.

In the same class belong sudden compression of brain, hæmorrhage from whatsoever source, foreign bodies in the larynx, trachea, or bronchi, all quickly ending in death if the resources of surgery are not employed to save. Also in the department of obstetrics, where for the lack of this knowledge and skill, death has swayed his sceptre for centuries past.

Professor Nausbaurn, I believe it was, in speaking of the necessity of enterotomy and gastrotomy in cases of internal strangulation and other abdominal sections said that "thousands now lie in their graves, who have died from these distressing conditions, while surgeons stood by as mere lookers-on, unable to help their patients."

Delay in this class of cases is to be condemned.

Most of us perhaps in this Assembly, can call to mind one or more unfortunate occurrences relating to cases of this kind in our own practice, or in that of neighboring colleagues.

Well do I remember with regret a child with a traumatic peritonitis, who was dosed with opium day and night for five long days without any surcease from pain; I had been told almost poetically that this drug was the "Anchor Sheet" in this disease, but it failed utterly to bring relief; but seemed to make matters worse, and a proposition made by an old and reputable physician, who was called in consultation, that I had prejudiced the prospect for my patient's recovery because in the beginning of the sickness I had given the child a mild cathartic seems to have met its fall almost at the threshold of its utterance, because of the very decided manner in which abdominal surgeons and others give salines freely and with undoubted success at this time.

Under the low rate of mortality in the operation of laparotomy at the present, even where it is necessary to perform ovariotomy and make ablation of tubes, a case of simple traumatic peritonitis ought to be restored to health by the resources of modern aseptic and antiseptic surgery.

As regards laparotomy, formerly the mortality was so great that no one not specially skilled in abdominal surgery would think of undertaking so formidable an operation; but, when surgeons of moderate skill save seventy per cent. of ordinary abdominal sections, I maintain that in severe injuries, where the delay would bring certain death, the general practitioner should be prepared for such contingencies and should give such relief as is ordinarily given by surgeons under circumstances of this kind.

In order to emphasize the proposition that the practitioner should do the most capital operations, under certain conditions it is only necessary to refer to a limited number of Cæsarean sections that have been done

by persons without title or rank, all of which have made phenomenal recoveries, and some of them lived happily many years afterwards.

Dr. Michaelis in the Southern Medical Journal, 1839, reports the case of a woman upon whom the Cæsarean section was successfully performed four times; the first operation was performed in June, 1826, the woman being then in her twenty-ninth year, the second in January, 1830; the third in March, 1832: and the fourth on June 27th, 1836, after the patient had been in labor three days.

Another case, in which a drunken negress, who acted as midwife, on being called to a black girl in her first labor, which was natural, took a sharp knife, and without any reason to justify her conduct, laid open the abdomen and womb, and took therefrom a living child. This girl speedily recovered, with no other inconvenience except a slight incontinence of urine.

Self-inflicted sections of the abdomen have been done, and the patient lived several years afterwards.

Paul F. Eve, in his remakable cases of surgery, relates a case of this kind in which the woman being in labor, in order to expedite matters did a Cæsarean section upon herself with a broken butcher knife; and although a part of the intestines came out of the wound, and was returned in a septic condition, the patient got well and lived many years afterwards.

These cases are only referred to to show the extraordinary endurance of the human system, and the curious and almost incredible injuries it has sustained and recovered from in the most gratifying manner.

Thus it may be seen that whatever menace may be present, and however proper it is to possess the instinct and training of the surgeon, it is to be remembered that most of the operations alluded to in this paper were performed by the general practitioner, or other persons whose learning or experience in surgery had little to do with the happy results.

Two curious cases in the practice of colleagues of mine, and the hopelessness of which would have justified Cæsarean section, were permitted to die undelivered. I am not informed whether this last prospect was held out to either of them, but be that as it may, these two cases are the only ones of this kind of which I have any knowledge in which the patient died in this peculiar condition.

Both of these cases occurred in the practice of gentlemen who stand deservedly high in their respective communities, both with physicians and laity; and it has always been a matter of wonder to me why these cases did not get the benefit of abdominal sections.

Numerous other and less important examples demanding surgical knowledge in the general practitioner and coming under the writer's notice, might be referred to at this time, but as you have been very patient with me, I will refrain from a discussion of the lesser affairs of surgery, which embrace lesions of the soft parts, fractures and dislocations, all of which properly belong to the domain of surgery; yet, by the very nature of environment and situation, a majority of these injuries must necessarily come under the care of the general practitioner. All of us should be prepared to do the most capital operations when from severe traumatism or other causes, life would be put in jeopardy by much delay; also little ablations or other small operations which relate to the less important lesions, and which for their relief no great risks are taken.

In short, we should know how best to promote the welfare of our patients, and if there is a reasonable doubt about undertaking any operation, the very best counsel should be had that can be readily obtained.

Finally, if there is anything else to do in the perplexities that confront us in the general practice, it is to keep cool, carry our conscience and God with us in every place of danger, and do no needless operations, remembering that our mission is to save and not destroy.

Keeping in mind the good involved in the right performance of small duties before aspiring to the honor and dignity of greater, and in our efforts to save human life, an adherence to these principles will bring us a large measure of success.

INTRA-PULMONARY INJECTIONS OF THYMOL IN PULMONARY GANGRENE.

Dr. O. Hewelke, of Varsovie, Poland (*La Semaine medicale*, No. 49, 1861), has successfully treated a case of pulmonary gangrene by intra-thoracid injections of a 1 : 300 or 1 : 200 solution of thymol made with a syringe, having a needle five to seven centimeters long, into the cavern. The results were immediate. The needle was pushed through the intercostal space corresponding to the spot affected. The expectoration became more abundant, the fetidity of sputa diminished, and the temperature fell quite considerably. With daily repetition of these injections the general and local symptoms so improved progressively as to more or less soon completely disappear.

MY LAST ONE HUNDRED OBSTETRICAL CASES.*

By G. C. LEWIS, M. D.,
FAIRBURY, ILL.

Of this number 90 were delivered perfectly normally; 47 were males and 53 females. There were two pairs of twins; one boys and one girls. Each pair had one placenta with two cords. The majority of the children were born at night, as is usually the case. Among the complicated cases were puerperal convulsions, ruptured perinæums, retained placentas, breech presentations, footlings, those requiring instrumental delivery, craniotomy, face and transverse presentations.

The normal cases we shall consider only in regard to their treatment. If the os uteri is slow in dilating, I give a capsule filled with chloral hydrate every fifteen or twenty minutes until the os is soft and patulous and perfectly dilated. If then the uterine contractions are not vigorous enough to accomplish the object intended, I do not hesitate to give a drachm of the fluid extract of ergot, if I can be reasonably sure that the longitudinal muscular fibres of the uterus will continue to contract and cause the circular fibres of the os to dilate, thereby securing the right of way for the descent of the child and the "vis a tergo" of the uterus will cause the child's head to take possession of the way secured, and descend through the bony pelvis. When the os is fully dilated, I rupture the membranes, as they then serve only to delay the second stage of labor. When the head impinges on the perinæum and causes it to bulge, I insert the index and middle fingers of right hand into the rectum (the woman lying supinely), and receive the child's head in palm of same hand, an thus cause the head to hug the pubic arch, and in this manner prevent rupture of the perinæum, and also be able to keep the head elevated so that no amniotic fluid, blood, etc., can enter its mouth when it attempts to gasp for breath. The umbilical cord should be tied in two places and cut between. The second ligature retains more blood in placenta, and the uterus has a firmer body around which to contract. I use Credé's method to expel the placenta. With left hand over the abdomen, kneading the womb, and with umbilical cord around two fingers of right hand, I have the patient hold her breath, and bear down gently, at regular intervals of a few seconds, and in a few minutes the placenta is expelled. By carefully following this method, I have yet to encounter my first case of post-partum hæmorrhage. After the placenta has passed from the uterus and through the vagina, let it lie there until all secundines have been removed. Sometimes there are none; at other times they are three feet long, and often very easily broken unless great care is taken. I believe, when the secundines are retained and become decomposed in uterus, they often are the cause of puerperal septicæmia. In the majority of medical colleges students are taught to give ergot only in the third stage of labor. Although it is good to prevent hæmorrhage, yet my experience leads me to believe it causes the uterus to firmly grasp the placenta, and cause the circular fibres to so contract that its removal is greatly retarded, besides causing unnecessary afterpains. In three cases do I well remember where a midwife, armed with "a certificate to practice medicine in the State of Illinois," had given so much ergot, to facilitate the expulsion of the placenta, that the patients had to be anæsthetized in order to relax the firm grasp of the uterus.

The anæsthetic I always use is the A. C. E. mixture—alcohol, chloroform and ether—in the proportion of 1, 2 and 3, with Allis' inhaler, so that the patient can get fresh air at every breath.

In anæsthetizing a patient, the pulsation of the carotid arteries can be carefully felt by the one giving the anæsthetic, much easier than the radial, and does not cause so much anxiety on the part of the friends. Pulsation and respiration are the two main things to be carefully noticed in administering an anæsthetic.

I have met with two cases of ruptured perinæum: one treated by a midwife and one in instrumental labor. I sewed up the lacerations with silk within an hour after they occurred, and each one made a perfect recovery.

I have met in consultation one case of puerperal convulsions, and may the good Lord deliver me from ever seeing another. After the attending physician had manfully battled with them for 18 long hours, I was hastily summoned to come and deliver with instruments—hoping the convulsions would then cease. I delivered her in half an hour. I then suggested the removal of the anæsthetic only to see her have another terrific and heart-rending convulsion. In spite of all we could do the convulsions persisted in coming until death came to her relief.

* Read before the North Central Illinois Medical Association, at Streater, Ills., Dec. 1 and 2, 1891.

PLACENTA PRÆVIA.

This case, primipara, aged 33, was also met with in consultation. After the attending physician waited thirty hours, the patient becoming completely exhausted from loss of blood, I was hastily summoned, made an examination and discovered a part of the placenta attached to the os and a portion descended into vagina. Tamponing was suggested and apparently worked well for a while, but soon the patient turned deathly pale, no radial pulse, sighing respiration and to all appearances dying. Tampon was hastily removed, and I actually had to tear my way through the presenting placenta to reach the child's head; the case was desperate. There had been no strong uterine contraction at any time. So forceps were quickly adjusted and the child's head brought down and engaged in pelvis. Hæmorrhage then ceased. Stimulants and ergot were given, A. C. E. also given by inhalation, traction on forceps kept up; but the head was so large, pelvis so small, that the head became completely locked. Craniotomy had to be resorted to. In a short time delivered her. The dead child weighed 12 pounds. The patient made a good recovery. Seldom do we encounter placenta prævia and have to perform craniotomy in the same case. I have attended this lady twice since. In one, labor was natural; but the last was instrumental—owing to lack of uterine contractions. This occurred just a few weeks ago.

PODALIC PRESENTATION.

One foot presenting; uterine contraction very powerful. Brought down second foot. Body was quickly and easily born, and expected the head to follow at next pain, but instead the os contracted terrifically and was choking the child to death. I hastily inserted my hand to relax the os only to have my hand grasped and squeezed as in a vise. After next pain ceased, quickly removed my hand, realizing that neither the child nor I could stand such compression. I gave A. C. E. and the os immediately relaxed, and after a few pains, child was born, but all efforts to resuscitate it failed.

TRANSVERSE PRESENTATION.

One night I was called ten miles into the country to attend a lady. As soon as I entered the house I saw something was wrong. Upon examination I found a very pendulous abdomen and the child lying transversely. It looked as if the mother had a child's hammock with a child in it bound to her body. The abdominal muscles were so distended and the fundus of the uterus so anteverted that the womb seemed to have turned a complete somersault, and the child hung without and below the pelvis of the mother. She could not sit down without the fundus touching the chair. I took a sheet, placed it under the pendulous abdomen and lifted it upward above the pelvis and fastened the ends with safely-pins. The os uteri was partially dilated, size of silver quarter; gave chloral and waited for relaxation of os. In four hours it was dilated sufficiently to introduce two fingers; then by means of external and internal manipulations succeeded in converting the transverse presentation into a vertex. After that labor was normal. Fine girl babe the outcome. In getting the history of this case I learned that when she was four months pregnant, she accidentally stumbled and fell headlong on her face. I thought possibly that that might be the cause and beginning of the development of the child transversely as described above.

The second case of transverse presentation was seen in consultation. The physician in attendance had delivered the parturient lady of one child and proceeded to remove the placenta, when to his surprise he discovered another child, but being unable to diagnose the presentation, sent for help. I arrived in a short time, diagnosed transverse presentation, and with one hand in vagina and the other over the abdomen succeeded in converting it into a vertex presentation and child was soon born.

PROLAPSE OF THE UMBILICAL CORD.

Two weeks ago met a case of this kind. First examination revealed nothing abnormal, and os dilated to the size of a silver dollar. Waited an hour and examined again: os fully dilated and head presenting and beginning to descend. Pains were working nicely. Then half an hour examined again to find a loop of the umbilical cord lying in vagina. I inserted two fingers carried the loop up along side of child's head and above it. Kneaded uterus with left hand and as the pain came on, slowly slipped my fingers away, the loop of cord persisted in following several times, but finally succeeded in having it retained, and child's head descended into the pelvis and prevented any other trouble. A girl babe was born in half an hour later. Umbilical cord has often been found wound once or twice around child's neck. As soon as head is born I pass two fingers between the child's neck and cord and hold it away from the trachea, although by doing this it will press more tightly on the back of the child's neck; but that does not make any particular difference

so long as the arteries and veins and trachea are not constricted.

THE FORCEPS.

In regard to the use of the obstetrical forceps, I believe as much as any one in "letting nature have its course" but there are times when nature fails and the accoucheur must come to her aid. Although a man may die from smallpox after being vaccinated, or may fall from grace after having joined church, yet that does not condemn vaccination nor religion; and because a woman may once in several hundred cases succumb to the use of obstetrical forceps, yet that does not condemn their use in properly selected cases.

Statistics, in the leading hospitals of England prove that whereas thirty years ago instruments were used only once in 310 cases, now they are used once in 8 cases. It is thus very apparent what a great change has taken place. Just seven months ago do I well remember having been summoned by a messenger, telling me to come with instruments and chloroform. Upon entering the house the attending physician said, "Glad to see you, doctor, we are all worn out." The lady in confinement asked, "Doctor can't you do something to relieve me I have been this way for fifty-two hours." "Fifty-two hours," I repeated. "Yes, fifty-two hours," exclaimed her mother and a couple of other attendants. I made an examination, found os uteri fully dilated, but complete uterine inertia. Every body and every thing were literally "played out." As the parties were quite wealthy and very desirous of an heir, I explained to them that I could deliver her all right but feared the child would be still born. Patient was anæsthetized, then handed the A. C. E. and inhaler to the other physician, with the lady in a recumbent position across the bed, and each knee supported by an attendant, I adjusted my Elliot forceps. They had to be inserted high up into the uterus to grasp the child's head, and then it took just one solid hour of firm, steady traction, with intervals of relaxing forceps to relieve pressure on child's head, until child was born. I thought child was dead, but hastily pressed my lips against those of the child and gently inflated its lungs, then compressed its thorax with my hands and expelled the air, then repeated the inflating and compressing as before, and kept on doing this for several minutes when to our great joy the child gasped for breath and soon rallied. The lady was a primipara, aged 23, and gave birth to a 13-pound boy. The attending physician slunk away as if conscious of criminal neglect. After the mother and child were properly cared for, and comfortably lying together in bed, I could scarcely suppress my indignation and condemnation on account of the way that lady had been made to needlessly suffer. I boldly told them all that she could have been delivered 24 hours sooner and with great deal less risk to the child. The attending physician had always advocated "letting nature have her way." He had never been known to use instruments himself, but was glad enough on this occasion to have some one assist nature and let him out. I have never let a woman suffer over 18 hours and never expect to, if it is in my power to give her relief.

I remember two couple who were married within twenty-four hours of each other, by the same minister, and just a year later and within twenty-four hours of each other I attended the ladies in confinement, and each required instrumental delivery. A bright girl babe the result of the first couple's marriage, and a fine boy of the second. My last case of instrumental labor was just two weeks ago. Primipara, aged 32, and weighing 250 pounds. After waiting twelve hours, pains having been stimulated with ergot and pressure over abdomen, the child's head had descended to the perinæum, and for three hours remained in same position. Pains were regular, but inefficient. Told the husband and wife I could soon relieve her with instruments, and they readily consented. My instruments were at hand, for I never attended a case of confinement in country without taking them with me. This was the first case on which I ever used instruments without first anæsthetizing the patient; but as the head was so low, concluded to try without the anæsthetic, although I had her husband hold bottle and inhaler in hand, ready if necessary.

The lady was bemoaning her condition and thought she had a harder time than most women. With each knee supported by an assistant, I easily and quickly adjusted the forceps, and in just five minutes by the clock a bright girl baby was born, when the mother exclaimed, "Oh! if it is no harder than that don't care how many more I have."

In every case of confinement, after the child is handed over to the nurse and placenta removed, I invariably change everything about the bed that is soiled; have a warm change of clothing for the patient, and a change of linen for the bed; bathe the parts with a soft cloth, dry them and anoint them, (all this can be done under cover) then apply a large cloth to the vulva, fastened in front and behind with safety-pins, to her undergarment. I usually let the patient have her own prefer-

ence whether she shall wear a bandage or not. If one is applied, have it done so neatly, and secure upper border of the band to her undergarment, to prevent slipping down, and secure lower border to the ends of the cloth intended for the absorption of the lochial discharge. When this is all done and the patient lying comfortably in bed, she feels as though she was in the seventh heaven. The after-treatment should be carefully directed. The parts should be carefully bathed, dried and anointed with vaseline two or three times a day, and a clean, warm cloth pinned on each time. I believe in *asepsis* rather than *antisepsis*, and that "cleanliness is the next thing to godliness.' When I leave a case of confinement, I tell them I will be around again in two or three days; but if anything should go wrong to let me know of it. I thus can make it a point to see how the after-treatment is carried out. If anything has gone wrong you can thus forestall it and nip it in the bud. By doing this, you can often avert a gathered breast, which, to some women, is more painful than giving birth to a child. You can learn the condition of bowels and kidneys of both mother and child. I have had to operate for phimosis at the second visit, when nurse said, "Child cried nearly all time and had passed no water." If any symptoms arise of that most dreaded disease, "puerperal septicæmia," or child-bed fever, they will be recognizable by that time, and you must be on the alert to adopt such measures as will suppress them, or at least render them more mild. Your presence the second time makes the woman feel you have taken a great interest in her case. Charge nothing for the after-visit. Besides all this, even if you find everything to be as it should be on your second visit, you have a better opportunity for studying human nature and meditating upon the future possibilities of the precious babe lying so sweetly by its mother's side. While thus meditating you will, perhaps, feel a desire to express your thoughts in the language of the poet:

> "Ah, blessings on those little hands,
> Whose work is yet undone!
> And blessings on those little feet,
> Whose race is yet unrun!
> And blessings on the little brain,
> That has not learned to plan!
> Whate'er the future holds in store,
> God bless the 'coming man!'"

Two fruitful causes of constipation mentioned by Dr. Lange are eating too much and chewing too little.

A CASE OF DIABETIC COMA.

By J. M. SHAFFER, M. D.
KEOKUK, IOWA.

From its rarity, its unknown cause and its speedy termination, this case is given the profession to profit withal.

Willie B——, white, aged 14 years; tall, slender, erect; history of constitutional or hereditary taint, negative; all moral and material surroundings of best character. It was the school vacation; he was a close student and had made some progress in Latin grammar. Had never been ill. December 27, 1891, parents noticed that he drank three or four glasses of water at dinner; that he passed a half chamberful of water during the night; drank water at night and mentioned thirst during day. Symptoms continued, were remarked upon, but thought to be mutually cause and effect. Was skating January 4, 1891, and engaging heartily in the winter sports of the holidays. On the 5th, exhibited dyspeptic symptoms which were promptly met; tendency to constipation. Other symptoms were of the nervous character accompanying *la grippe* epidemic here, and a member of the family suffering with it. The excessive micturition and thirst continue. 8th, labored respiration, mostly thoracic; decided hebetude. 9th, at turn of night, moribund; stimulants and external applications, rallied; temperature from 96° to 98.5°. Enough consciousness six hours before death to attempt to protrude tongue. Cried out several times, and being spoken to, said: "It hurts." Died comatose at 10½ A. M. of January 9th, or about ninety-six hours after treatment begun. Urine passed evening of 8th gave this analysis: Color, limpid; reaction, acid; specific gravity, 1.032; loaded with sugar, one-quarter part by Prof. Haine's test and by improved bismuth test.

On the occurrence of a similar case with the two symptoms—excessive thirst and large urinary discharge—it might be well to produce stasis by opium, just short of narcotism, to stop the exhaustive process and gain time to establish nutritive action by alcohol and concentrated food by the mouth and by enema.

An ounce of camphor dissolved in three ounces of turpentine has been used in Columbia Hospital for Women to check secretion of milk in mastitis. It relieves pain, diminishes induration, and reduces inflammation. Care should be taken, that the part should not be so tightly covered that the application shall produce irritation of the surface.

SOCIETY REPORTS.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Scientific Meeting, December 15th, 1891.

T. D. Davis, M. D., President, in the Chair.

Subject for discussion, Syphilis.

Dr. Thomas: It was but a few days ago that I received a notice requesting me to open a discussion at this meeting. It is usual to open the discussion with a well-digested paper. The time has been so short that it would be impossible for me to prepare anything worthy of the dignity of a "paper." What I shall present will be more in the form of a syllabus, expecting you to elaborate.

1st. How long is syphilis contagious?

The profession, as a rule, does not have definite and uniform opinions upon this point. Judging from remarks that I have heard made at various times, some believe that there is no limit to the *contagious* character of syphilis, forgetting that the disease is a self-limited one.

Possibly I can formulate my views better by reporting three cases, from a number of similar ones, from my case-book, as follows:

Case I. Mrs. A. married, when the man who became her husband was in the secondary (end of first year) stage of syphilis. In ten months afterward she gave birth to a very large (weighing 12 pounds) and healthy looking child. The child was still-born, not from syphilis, but from asphyxia, owing to tardy delivery of the head, the presentation being pelvic. The case was in charge of a midwife, and when I arrived upon the scene I found a dead child hanging from the vulva.

In nine months after she gave birth to a macerated fœtus of five months utero-gestation.

In another eleven months she again gave birth to a macerated fœtus of seven months utero-gestation.

In one and a half years more she gave birth to a full term and healthy looking child. In a short time this child developed a papular syphilide. It remained under my care for two years, and is to-day a large and healthy looking lad.

In another twenty-one months she gave birth to a fine child that never presented the least suspicion of syphilis.

In two years more she gave birth to a healthy child, which is now nearly three years old, and has never shown any evidence of syphilis.

Mrs. A. has been under my continuous observation since her first accouchement. I have been unable to get a history of primary lesion or secondary symptoms in her case; she passed through them without her knowledge, but I have treated her for serious tertiary lesions, such as deep ulcers on the posterior fauces, headache and syphilitic liver.

In the case, supposing the mother acquired syphilis in the early months of marriage, the contagious character of the disease disappeared in about four years. She received no treatment for her early syphilis.

Case II. Mr. B., in the summer of 1885, acquired a chancre on the lip through kissing a prostitute, and conveyed the disease to his wife, who was also treated by me. They already have several children.

On March 3, '86, a living child is born, but dies in five months from marasmus, having been puny from birth.

On May 30, '87, at full term, a macerated child is born.

On August 31, '88, a healthy child is born and remains free from the disease.

On Feb. 17, '90, a healthy child is born and so remains to the present time.

In this case the mother ceases to convey or transmit the disease in less than three years.

Parenthetically I mention that Mr. B. also conveyed the disease to his little son, two years of age, by kissing him on the forehead where there happened to be an abrasion, for it was here the chancre developed. Recovered.

Case III. Mrs. C. contracted a chancre about the time of her marriage, and was treated by me for the secondary lesions. She became pregnant for the first time in 27 months after her marriage. The child was born at full term and apparently healthy, but in about three weeks snuffles began, an eruption appeared about the anus and afterward over the body. After a long treatment it recovered.

In one year and three months after the birth of her first child she again became pregnant, went to full term and was delivered of a healthy looking child. The child is now about three months old and has shown no signs of syphilis. Neither has it received any anti-syphilitic treatment.

In this case the contagious character of syphilis disappeared *before* four years and three months—some time *after* the third year.

You may say that the child is only three months old and that it may develop syphilis later. If a child is born and does not pre-

sent evidences of syphilis before the end of the third or fourth month it is rare that it ever will. Out of 158 cases summarized by Diday only five cases presented symptoms of syphilis after the fourth month.

In brief, then, I believe that syphilis is not contagious, as a rule, after the fourth year. Exceptionally in the female it may continue until the fourth year.

2nd. What secretions contain the syphilitic virus?

None of the *physiological secretions* of the body.

Experiments by inoculation have been practiced again and again with the physiological secretions of syphilitic patients upon healthy persons without the production of the disease. Diday and others have inoculated persons with the saliva from syphilitic patients who were free from mouth lesions without results. Spermatozoa from a patient in the height of the secondary stage of syphilis have been inoculated, by Mireur, in the non-syphilitic without producing the disease. The same thing has been done with the other physiological secretions of the body and with a like result. The only elements, then, in the body that contain the germs of syphilis are the blood, and the serum which is found upon the lesions of syphilis upon the skin and mucous membranes. A man may be suffering from the secondary stage of syphilis, and providing he be free from lesions of the skin and mucous membranes, many procreate a perfectly healthy child, because he cannot inoculate the mother and a non-syphilitic mother never brings forth a syphilitic child—she cannot.

Dr. Batten: I have given a great deal of thought to this subject. The presence of the syphilitic germ depends a great deal on circumstances; upon the temperament and the constitution of the patient. In the discussion of this question we have to depend a good deal upon the truthfulness of our patients. It is impossible to watch a patient carefully; we must depend a great deal upon his veracity. Now I believe syphilis may be conveyed a long time after the patient has contracted the disease. For instance, a man has contracted syphilis in about 1869. He marries in 1882 a very plump and healthy woman, who weighed about 120 pounds. Shortly after she conceived, and gave birth to a child. Sometime during her pregnancy she took syphilis, and I treated her. The child was born healthy, but the mother was reduced to 95 pounds. She had a second child, and the second child is healthy. Both of these children are healthy, although the man's appearance denotes that he has syphilis, and denoted that before he was married.

Another case was a man whom I treated for the disease twice. He went through the usual course. He married and his wife has had three children, and they are all healthy. The wife is a healthy, fine looking woman, and well.

Another case that came under my observation was a young man who had the disease. He married and impregnated the wife, and the child was dead in the uterus. Before the next pregrancy I put her under treatment. and since that time her children have all been born healthy, and all are healthy and living at the present time. I believe, and my experience bears me out in my belief, that a person once syphilitic is always syphilitic, and that the disease may be conveyed through any of the secretions of the body.

Dr. Green: I have no criticism to offer on the paper. I believe my observations would lead me to agree with the paper. I might state an example or two that have come under my observation. One case occurs to me in reference to the length of time that the poison may remain in the system and be conveyed to others. I remember treating a young man quite a number of years ago, I think some seventeen, probably eighteen, for syphilis; he went through all the symptoms, primary and secondary. I told him not to marry for at least three years. I was not aware there would be no danger at that time, but I supposed the most dangerous period would have passed; but he married short of three years—two years and eight months. I attended his wife in confinement, but failed at any time to observe any syphilitic symptoms in the first child. I attended her in seven confinements, and I never saw healthier children than these. They are all living today. When I see them, I fail to see any symptoms in any of them; and to show you how violent an attack of syphilis this young man had, he resigned his situation and left the city and went into Maryland while the eruption was on his face. He was completely discouraged during the first year of his illness; it seemed to break his entire constitution, and I cannot tell how it happened these children are so healthy. The father of the children was killed about a year ago. About three months ago I saw the mother of the children, and according to my observation she has never shown any symptoms of syphilis. I could mention numerous instances similar to that.

Dr. Shillito: In 1883 a gentleman came to my office, who at that time expected to be

married very soon, and related this history: He told me that during the war he was a clerk in Washington City. He had contracted syphilis and had been treated by what he considered the best physicians he could find. He came to Pittsburg, and up to that time had one attack of iritis; he had also had a skin eruption. When I saw him he seemed to be a man of average health. The nasal septum was perforated. I told him after so long a time and after having received so much treatment, that there was no particular danger of transmitting it to his offspring. He married. I attended his wife in confinement, and delivered her of a living child. I think about one-third of the epidermis of the face had gone and one eye was entirely gone. The other eye was wanting until you could only see a little coloring of the cornea, and one spot that seemed to be as large as a pinhead, but since that time it admits a little light. That child enjoys good health, most excellent health, up to the present time, although of course permanently blind. I took special care to watch the mother both before and after for any marks of syphilis. I have knowledge of her ever since until up to a very short time ago, but I have not seen her within a year or two. She has had no evidence of syphilis. I understood about a month ago that she had become insane, or troublesome, and had been taken away to some asylum. They had but one child. He contracted syphilis during the war, and the child was born in September, 1884.

Dr. Thomas: What was the form of the trouble with the child?

Dr. Shillato: The epidermis of the face was nearly half gone. One eye was entirely gone and the other had just a stump.

Dr. Williams: It may be that the original trouble contracted in Washington City was not syphilis. He might have had bubo, and not had syphilis after all. There might be a suspicion that he contracted syphilis a year or two prior to his marriage, and I think it is certainly a fact that a person may contract syphilis and not have any perceivable primary lesion. I am not certain of that. I have had some experience in some of these cases, and it would certainly bear out the statement made by Dr. Thomas; and I could relate a number of instances to substantiate my position. For instance, in one case a young man had syphilitic trouble in 1883, and about the beginning of 1884 was married and his wife was delivered of a still-born child about the beginning of 1885. About 10 or 12 months after she had another still-born child. About a year after that she was delivered of a living child. About 1887 and within the past two years I have attended her twice, and her children are apparently healthy and doing fine. This was some eight years after the father contracted the disease. I am certain that if a case is properly treated the liability to convey the disease disappears after a period of three or four years. I think it depends on whether the patient has been properly treated. Unfortunately some of them are not well treated.

Dr. Lange: The matte introduced by Dr. Thomas is one upon which likely, no medical body in the world would have one opinion in almost any aspect. For instance, Dr. Batten has said that temperament, disposition or character has an influence in contracting syphilis—that a plump person with ruddy skin, blue eyes and light hair is more likely to take syphilis than a brunette. In other words, that the so-called lymphatic temperament is a predisposing cause. Now a good many members here will not agree with that opinion. It may be that a patient of lymphatic temperament will suffer more severely, but I do not agree that such an individual will take syphilis quicker or more readily than a brunette. Dr. Thomas asserts that none of the secretions are contagious if the patient, after having syphilis, presents no symptoms. I have a family in my care where the father contracted syphilis after marriage and after having two robust, healthy children, he himself being a remarkably robust, healthy man, an oil driller, and his wife being a strong, healthy woman. This man had two children when he contracted syphilis. He had treatment for three years, and at the end of that time presented no symptoms. Then he had two additional children born without symptoms; one of these is now about five years and the other about three. They have presented no symptoms of syphilis. Now he has a child 18 months old, which is syphilitic very distinctly. It may not be fair to say with some members here that once syphilitic always syphilitic, but it is certainly remarkable that towards the end of life syphilitics who presented no symptoms for many years, again have this disease reassert itself, and often such reassertion ends life. This comes as aneurism, apoplexy, atheroma, aud as connective tissue hyperplasias of the brain, the liver, the cord, etc.

Dr. Barclay: My impression is, from what I have seen, that syphilis, after the secondary stage, is possibly not contagious, although I am not certain about that. It is not advisable for persons who have had

syphilis to marry short of three years after syphilitic manifestations have disappeared; that has been my rule, to advise persons who have had syphilis not to marry short of three years after all manifestations have disappeared. I have said to them with a good deal of confidence that I thought it would be safe after that to marry. I saw recently a young girl who was poisoned by a dentist. The dentist who extracted her tooth abraded her lip. I saw her three weeks afterwards, and my opinion was, after I examined her, that she had been poisoned. I was careful not to give her a positive opinion, but advised her to see other physicians. They were of like opinion, advising me to watch the patient for manifestations. The secondary manifestations came on in about sixty days afterwards, and there is no question she was poisoned in that way. She said the dentist hurt her lip at the time he extracted her tooth. To me it was a very interesting case. I have treated her since and her hair has dropped out. This case was referred to a lawyer, and in all probability there will be a case in court. I have placed myself in a position of security by having her see other physicians; three or four other physicians have examined her, so if it comes into court the profession may be protected.

Dr. Buchanan: I have nothing to say on the subject introduced by Dr. Thomas, but I have a word to say about the case which was reported in which a dentist is charged with having introduced syphilis by means of his instruments. We all know the variety of ways by which an abrasion of the lip can be made. I think if this case should come into court, the plaintiff would have the very greatest difficulty to prove that the abrasion on the lips was the site of the chancre, showing that the inoculation was made by the instrument that produced the abrasion. Suppose this girl had a family friend who had something on her lip, and that she kissed her friend good-bye at a station about the time when she received the injury at the dentist's, she would have received this inoculation, and the dentist would have to bear the blame. This girl might have received the inoculation by a drinking cup, she might have wiped her face with a towel that the servant girl had used, she might have received it in a thousand ways, and still this dentist must bear the blame. I think, as we use the instruments ourselves, we should be exceedingly careful of implicating in any way any member of the cognate profession of dentistry.

Dr. Barclay. I appreciate what Dr. Buchanan has said, and I have been just as careful as he could be. It seemed to me from the history of the case that she was certainly poisoned by the instrument. I know and appreciate just as highly as any one could, how much danger there is to the dental profession and the medical profession from this very cause, and I very carefully looked into that matter, and I am well satisfied when I say I believe she was poisoned by a dentist's instrument. The history of the case goes to prove very clearly that the lip became indurated the third day, that there was a large lump in her lip and the glands were sore. Of course what Dr. Buchanan said is true: she may have kissed a friend. I inquired as to that and I am satisfied if she was poisoned by any other means except the one referred to, she was innocent of knowledge of it.

Dr. Buchanan: According to this statement, the chancre appeared on the third or fourth day after the inoculation. We all know that is entirely too short a time. We know if we inoculate a person with syphilis it never appears on the third or fourth day; it takes a good while longer. If it appeared on the third or fourth day after the dentist extracted the tooth, then he did not inoculate her.

Dr. Barclay: Morton, in a recent work, states it may make its appearance on the first up the seventieth day.

Dr. Davis: I would like to ask the society if any one has known a case of syphilis to be communicated after the third year to their children, or any one else; that he can say of his own experience syphilis has been communicated after the third year.

Dr. Williams: I have in my charge a man who was married seven years ago, who had an eruption on his body. He had a chancre, but did not give it any attention. About six month after the manifestation of syphilis, after the rash manifested itself, he married, and in due time a rash of similar kind came over the wife. He was then taking anti-syphilitic treatment. I do not remember the exact year, I think three years after his marriage, his wife was delivered of a child, and unlike the cases reported by Dr. Thomas, there was a manifestation of syphilis on the skin, entirely covering the child. The child died in about three weeks. Four years after this the man was presented with another member of the family, and a like condition exactly was manifested in the child.

During this time he was taking anti-syphilitic treatment.

Dr. Lange: I stated a case a little while ago and forgot to say that during the time these three children were conceived and born

the mother had not at any time any manifestations of syphilis; never at any time. Two of the children are healthy, the last one syphilitic, and the mother at no time presented syphilis.

Dr. Davis: Do you know whether she could have taken syphilis?

Dr. Lange: She never had symptoms.

Dr. Green: Can you exclude all evidence of a nurse or some of the attendents not conveying it to the child. I have seen a number of instances myself where the mother and father were clear, yet the child was syphilitic.

Dr. Lange: These children were fed with bottles, in the hope that if taken away from the mother it would lessen danger in the first two, and the third child was nursed.

Dr. McKibben: On the 2d of August I delivered a woman whose husband was treated for syphilis about six months, when he got careless and stopped treatment. After three months he had mucous patches in the mouth, for which I treated him. He was anxious to get married. I told him it would not be advisable, but after a period of about eighteen months he married; his wife became pregnant, and the child was born on the 2d of August, perfectly healthy, and the mother has not shown any symptoms.

Dr. Shaw: I have in mind four men who had syphilis before marriage. Three of them had it severe enough to warrant a visit to the Hot Springs. They have all married, all have children and none of the children have ever shown any manifestation of syphilis. I cannot give the exact time in any one case, but an interval of at least three years from the time of the first manifestation of the disease elapsed before the marriage took place.

SELECTED FORMULÆ.

A LOCAL ANÆSTHETIC.

Struver recommends the following:

℞
Cocaine.....grammes 5.
Antipyrin..... " 15.
Distilled water..... " 80.

—*L'Union Médicale.*

TREATMENT OF TYPHOID FEVER.

A good authority in Paris recommends the following treatment for typhoid fever:

℞
Salicylate of bismuth.....grs. x.
Naphthol A.....grs. viij.
For one wafer, night and morning.

Sulphate of quinine.....grs. xx.
Extract of cinchona.....3 j.
Decoction of valerian.....3 iv.
To be administered by the rectum at four in the afternoon each day. Besides which, three enemas of cold water during the day. Bordeaux wine and beef-tea.

PAPOID IN DIPHTHERIA.

℞
Papoid.....gr. x.
Aquæ.....3 ss.
M. f. solution.

Kohts and Asch painted diphtheritic membranes with this solution every fifteen or twenty minutes with a soft brush. They found that the oftener the application was made the more rapidly membranes disappeared. Kohts treated several hundred cases by this method with the greatest success.

℞
Papoid.....5 ij.
Beta-naphthol.....gr. iij.
Acid hydrochl. dil.....gtt. xv.
Aq. destil. ad.....3 iv.
M. ft. solution. Sig. Use carefully and thoroughly by means of hand atomizer every half hour on throat and through nostrils on posterior nares and pharynx, if deposit extends to these localities. Papoid solutions should be made fresh.

TREATMENT OF ACUTE GONORRHŒIC ORCHI-EPIDIDYMITIS.

Dr. W. Parker (*La Semaine Médicale*, No. 55, 1891) recommends the following:

℞
Argent. nitrat.....grammes 4.
Ether nitros. alcoholizat..... " 30.
For external use. This is painted, with a stiff brush, on the testicle attacked, once a day for two consecutive days.

Then he employs the following:

℞
Laudani..... } āā grammes 40.
Plumbi subacetat. liquid..... }
Aq. destillat..... " 440.
For external use. Apply a compress to the testicle, which is kept constantly soaked in this solution.

The effects of this treatment are said to be excellent. The pain and inflammation rapidly disappear.

EXPECTORANTS.

The *Lancet-Clinic* says that Dr. Rossbach (*Ugeskrift for Læger*) praises the following:

℞
Morphiæ hydrochlorat.....gr. ss.
Apomorphiæ hydrochlorat.....gr. ss to j.
Acid. hydrochloric. dilut.....gtts. x.
Aq. destillat.....3 v.
M. Sig. A spoonful every second to fourth hour.

We have found the following efficient at times:

℞
Tinct. opii camphorat,
Syr. pruni Virg.,
Fl. ext. glycirrhizæ,
Spts. frumenti.....āā 3 j.
M. Sig. A teaspoonful every hour.

RECURRENT TONSILLITIS AND PERITONSILLITIS.

Dr. Tori (*La Rivista clinica e Terapeutica*, No. 10, 1891) employs the following:

℞
Iodii metallic,..... .....centigrammes 10–30.
Potas. iod., }
Tannin, } .....āā grammes 1–3.
Aquæ..... " 100.
Use as a gargle two or three times daily.

If this be used faithfully for three months the patients will be permanently, or for years, relieved of their recurrent attacks of tonsillitis.

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LEADING ARTICLE.

THE EFFECTS OF LA GRIPPE UPON THE MIND AND NERVOUS SYSTEM.

The degree to which epidemic influenza disturbs the nervous system varies very much in different epidemics. Although this is affirmed by many prominent clinical observers, no one as yet has satisfactorily explained why this is so. It may be safely said, however, that, apart from atmospheric conditions favoring the development of the specific poison, the chief reason is, most probably, in the general constitutional conditions of the affected community. Thus, among a class of persons prepared by heredity, mode of life, or special predisposing causes to have some form of nervous or mental disease, we can readily imagine how an ordinary epidemic of influenza would prove in this community largely productive of nervous or mental troubles.

Among all classes influenza is quite commonly complicated with or followed by symptoms indicative of disturbance of the nervous system. Everyone is familiar with the severe frontal headache, the torturing back-ache, lancinating pains in the limbs, the throbbing local eye-pains, and also the nerve-exhaustion, insomnia, various hyperæsthesiæ, vertigo, supra-orbital neuralgia, stupor, convulsions in children, and even graver nervous symptoms.

An excellent paper entitled "Nervous and Mental Complications of La Grippe" has recently been read before the Academy of Medicine by Phillip Zenner, A.M., M.D., of Cincinnati, in which he reviews the more common nervous troubles above referred to, and also reports some very interesting cases. One of these was that of a woman, aged 52 years, who had an ascending paresis deepening into paralysis, which commenced with numbness in the toes two or three months after her attack of influenza, and gradually ascended to the lumbar region, when the hand and arms also became affected. Sensation and muscular sense were impaired. She died in about one year of exhaustion and

bedsores. The writer inclines to the belief that the case was one of myelitis and not a multiple neuritis. It will occur to anyone that possibly the attack of influenza should not be held directly responsible for such symptoms as this case presented, when several months elapsed prior to the development of the trouble. The same author reports in the same paper three cases of mental confusion with abnormal fears and irritability, a borderline case of insanity, and a case of acute delirious mania attended by labial tremors and sluggish movements of the iris to light, but ending in recovery in one year. The symptoms in the later case directly followed influenza.

Thus *grave nervous maladies* may complicate or follow epidemic influenza. We cannot attempt more than to briefly indicate the varieties of nervous affections which have been reported during the past two years. For the sake of convenience these may be divided into the following groups:

I. Functional nervous disturbances, including nervous troubles of almost every organ of the body, and hysterical affections.

II. Inflammatory diseases of the nervous system, including meningitis, cerebral or spinal; polio-myelitis, optic neuritis, peripheral and multiple neuritis.

III. Systemic nervous affections, such as neurasthenia, glycosuria, exophthalmic goitre, epilepsy, chorea, etc.

IV. Paralytic affections, including aphasia, hemiplegia, ocular paralyses, optic atrophy, ascending palsy, etc.

V. Insanity, which, judging from reported cases, may take any of its various forms.

The purely nervous diseases having already been referred to, the last class of cases may properly be considered briefly. There is now no doubt concerning the power of influenza to induce an attack of insanity in a predisposed person, and many go further and say that it may be the only cause of the attack. The mental affection may occur at the very beginning of the attack of influenza, may arise as a complication during the stadium of the disease, or may appear as a sequel. Dr. Authur H. Harrington, of Danvers, Mass., has contributed a valuable paper bearing upon this subject, which he read at the Annual Meeting of the Massachusetts Medical Society, June 10th, 1890. His paper is based upon twelve cases occurring in the Danvers' Asylum, together with thirty-six cases collected from the insane hospitals. In thirty-one of these cases grip acted as an exciting cause, but other causes were also presented in their histories. In the remaining seventeen cases, influenza was the sole assignable cause. Of the whole number thirty-three per cent. recovered. Harrington considers from a study of these cases that while any of the common types of mental disease may follow influenza, acute confusional insanity is most common. He also publishes in his papers replies from his circular letter of inquiry to various hospitals, as follows:—From Dr. Cowles, of the McLean Asylum, "I do not know that the mental symptoms have presented any noticeable peculiarity except the tendency to prompt recovery as if upon the abatement of some debilitating or depressing iufluences;" from Dr. C. M. Hay, of the State Hospital at Morris Plains, N. J., "Generally the insanities in these cases have been of a very marked type, but whether this was due simply to the exhaustion in which the mental affection found them, or was connected with a specific toxæmia I cannot say."

Some cases have been reported in which influenza exercised a favorable, or even curative, influence upon insane patients, but we think that its beneficent effects have been largely exaggerated. No doubt it has modified many cases of insanity in the same manner that any severe illness may modify mental symptoms, or even such disturbances as the epileptic convulsion. Many instances are known to us in which epileptic cases, having usually two or three fits a day, would not have a single convulsion during a prolonged illness, both medical and surgical in character.

Concerning this alleged tendency of grip to cure insanity, Dr. Lyon, the present Super-

intendent of Bloomingdale Asylum, says, "I have seen no such remarkable cures from chronic insanity, or any other form, effected by the 'Grippe,' as I have read of;" and Dr. Park, of the Worcester Hospital, says, "We have had no cases of recovery from chronic mania due to 'Grippe.'" We cannot but think this error in observation is responsible for these reported cures of insanity by influenza. Metz (*Neurolog. Centralblatt*, 1890) reports a case of paranoia cured completely, and Helweg (*loc. cit.*) adds two cases of dementia, one improved and one cured. Helwez also advocates the use of antifebrin to favorably influence the nervous and mental complications of grip.

What conclusions may be drawn from the wide array of nervous and mental symptoms which confront us in the current literature concerning epidemic influenza? Although we may wisely make allowance for an element of exaggeration of its etiological importance, no one can go over the subject without being impressed that influenza does cause widespread disease of the nervous system, and also has the power to derange that highest expression of organic life, the Mind itself; and we must conclude that it does so by disturbing, in some manner at present only to be conjectured, its physical basis—the brain. There is nothing strange in these effects of influenza. We note many nervous troubles arising from other infectious diseases, as, for example, typhoid fever, diphtheria, and malaria.

The practical point to bear in mind concerning this whole subject is its etiological importance, especially as it bears upon prognosis. Although nothing very definite may be stated at present, the indications are that all nervous and mental troubles arising directly or indirectly from epidemic influenza have a more favorable prognosis than if arising from other causes, or idiopathically. This is especially true of all functional nervous and mental troubles, and in the latter cases even some physical symptoms of brain disease may be of much less fatal import when they occur in the psychoses due to grip.

While, in our opinion, influenza should not be introduced into the nomenclature of nervous and mental troubles (as has been already attempted), still it is of the utmost importance to give due weight to its causative influence, as shown in the reported testimony, bearing in mind that it shares the power of producing all of these grave neuropathic disturbances with other infectious diseases.

BOOK REVIEWS.

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By T. Galliard Thomas, M. D., LL.D., Emeritus Professor of Diseases of Women in the College of Physicians and Surgeons, New York, and Paul F. Mundé, M. D., Professor of Gynæcology in the New York Polyclinic. New (sixth) edition, thoroughly revised and rewritten by Dr. Mundé. Large 8vo., pp. 824, with 347 illustrations. Philadelphia: Lea Brothers & Co, 1891. Price, cloth, $5.00; leather, $6.00.

This new edition of Dr. Thomas' work will be received with more than usual interest because of the solid merit of previous editions and of the popularity which they enjoyed for many years. To bring out a new edition of a work on gynæcology ten years old, during which time the subject has been marvellously progressive, is no mean task, and at the same time to try to preserve the peculiar and characteristic features of the work, is a very difficult task indeed. On the whole, we feel that Dr. Mundé has done his work well, and the book will continue to be one of the standard text-books of the day. Nevertheless, we feel that further alterations, omissions and substitutions would have brought the work more in touch with the current thought. This criticism applies, however, to most text-books, especially to those on subjects in which rapid progress is being made.

It is assumed by authors that relatively new theories or modes of practice should not be considered in a text-book for fear that further experience should prove their fallacy, while they ignore the fact that much which they present is obsolete or obsolescent. We feel that this distinctly detracts from the value of all text-books, especially those on gynæcology. It might be well to put obsolescent matter and new matter in smaller type, but certainly if one is retained the other should be produced.

The peculiar and good features of this book are so well known that it is scarcely necessary to refer to them here. It is pleasant to note many improvements in this edition. The

illustrations are distinctly better and more profuse. New chapters on Electricity, Hermaphrodism, Diseases of the Urethra and Bladder, and Diseases of the Female Breast have been added.

It is interesting to find that although Dr. Mundé was one of the first to use electricity for the diseases of women, his estimate of its value is a very moderate one. It is equally gratifying to find that so careful a man is convinced that it has positive value in the treatment of chronic inflammatory conditions (when pus or retained secretions are not present), and of neuralgias and of uterine fibroids; that its action on morbid conditions within the pelvis is quite similar to that in other portions of the body.

The chapter on the perinæum and its injuries and their results is most elaborate and carefully written, and is an able presentation of the author's views upon the subject. Those, however, who have been convinced by the teachings of Emmet, that the old theory concerning the perineal body so-called is wrong, will not agree with many of the author's views. It is lamentable, also, that so inadequate a presentation of Emmet's views upon the functions of the pelvic floor, and the nature of lacerations thereof, and the proper method of their repair, should be given. In criticising this operation of Emmet's, the author says that it is a perfect operation for rectocele, but leaves the vulvar orifice gaping, and is, therefore, defective. In this opinion he differs from Noble, Kelly, Price and others having large experience with it, and who have had only perfect results.

The illustration of "Emmet's new operation for lacerated perinæum," (p. 205,) is absolutely incorrect. With sutures introduced as there figured the result would be that stated by the author—but the operation figured is not Emmet's.

Dr. Thomas somewhat extensively treats of subinvolution of the vagina and of the perinæum (p. 167), describing the physical conditions which are recognized by others to be due to submucous laceration, or overstretching of the levator ani muscles and the perinæal fascia. He claims priority in calling attention to the subject. It would seem that his claim rests upon a determination of the real nature of the conditions present.

The alterations in the chapters on Pelvic Peritonitis and Pelvic Cellulitis are extremely slight. This is also true of Hæmatocele and Ectopic pregnancy. Much of the matter on Pelvic Cellulitis should have been transferred to the chapter on the History of Gynæcology. The chapter of Diseases of the Fallopian Tubes shows that Dr. Mundé appreciates the remarkable progress which has been made in our conception of pelvic inflammation and its treatment within the past ten years, but he clings to the old pathology which has been largely disproved and displaced.

The work of the publishers is in every way satisfactory: paper, printing and illustrations being unusually good.

ESSENTIALS OF PHYSICS, ARRANGED IN THE FORM OF QUESTIONS AND ANSWERS, PREPARED ESPECIALLY FOR STUDENTS OF MEDICINE, by Fred. J. Brockway, M. D., Assistant Demonstrator of Anatomy at the College of Physicians and Surgeons, New York, with 155 illustrations. W. B. Saunders, publisher, (Phila) 1892. Price,$1.00

Saunders' Question Compends are already notable for their uniform excellence, and the present number is no exception to the rule. The author has endeavored to compile a work which would embrace what the student of medicine should know of the subject, and in this he has been very successful. As a whole, the Compend is most excellent.

SURGICAL ANATOMY FOR STUDENTS. By A. Marmaduke Sheild, M. B., (Cantab) F. R. C. S., Senior Assistant Surgeon, Aural Surgeon and Teacher of Operative Surgery, Charing Cross Hospital. D. Appleton & Co., New York. 1891.

A careful reading will convince any one of the value of this little book of 200 pages, which covers in a very complete manner the field of practical surgery. The subject is dealt with in a very direct and practical manner, and it will prove a useful, handy reference book for practitioners. For teaching purposes, if used in connection with the cadaver, it will probably be found very advantageous to the student.

It is issued in an attractive and convenient binding, with very readable print. A liberal use of explanatory headings, and heavy type for the sake of emphasis to certain most important parts would have added something to the book. The same may be said of the introduction of diagrams and wood-cuts to illustrate important parts. However, we already possess such a list of well-executed drawings for the student that their absence in this book is a sort of relief, and an advantage to the book perhaps, for its chief value is in its admirable arrangement, and its use of plain, explicit directions, entirely suitable to the student-mind.

As a contribution solely adapted for the surgical anatomist—the purpose for which it was prepared—we can heartily recommend it.

LITERARY NOTES.

Mrs. Humphrey Ward's new novel, "The History of David Grieve," has proved so great a success that the publishers have decided to issue at once an edition in larger type, in two volumes, uniform in size and style, with the Eversley Edition of Charles Kingsley's works. The new edition will be printed by Berwick & Smith, in Boston, and will be ready before the end of the month.

Apropos of the eighty-third birthday of President Lincoln, *Harper's Weekly* for February 13th contains a superbly illustrated article by Charles Carleton Coffin on the "Ancestry and Early Years of Abraham Lincoln." The illustrations, which are numerous, include views of the localities made famous as the scenes of Lincoln's childhood and youth, as they now appear, and the portrait is from the first ever taken of the President. Of this picture Mr. Coffin says: "It was taken in 1857 in Chicago. Lincoln was visiting his niece, Mrs. Harriet Chapman, in Charleston.

"'Uncle Abe,' she said, 'I want your picture.'

"'Hattie, I never had it taken, but I am going to Chicago in a few days, and will sit for you," he replied.

"A few days later the picture was received by Mrs. Chapman. I obtained this copy in Charleston, Illinois, October, 1890, and received the above information from Mr. W. G. Chapman."

Sir Edwin Arnold, who has been enjoying an interesting trip through the United States, has made a careful study of the conditions which govern the family in Japan and embodies his ideas in a paper called "Love and Marriage in Japan," in the February number of *The Cosmopolitan*. The article is illustrated by the quaintest possible Japanese sketches, running down the sides and across the bottom of each page. An excellent photograph of W. D. Howells serves as a frontispiece, and his work as a writer of fiction is reviewed in the same number by H. H. Boyesen. The President of Johns Hopkins University gives a most practical paper for parents on "Boys and Boys' Schools," illustrated by cartoons of the famous Attwood. Murat Halstead turns back lovingly to his early farm days, and tells of the "Pets and Sports of a Farmer Boy." The petroleum industry is fully illustrated; An Afghan Story by Archibald Forbes; The Story of the Brazilian Republic, by Adams, late Minister to that country, and The Leading Amateurs of the United States in Photography, are other leading articles of the month.

THE PHYSICAL TRAINING OF BOYS.

Boys of to-day have great advantages in their physical training over those of even ten years ago. It is easily within the remembrance of those of us who have not been out of college so very long, how the mere mention of football at home brought down a storm of parental wrath, while unrelenting prohibition followed us back to school. The game was then an enigma, and the newspapers added horror to the mystery by printing their accounts of matches in a manner calculated to chill the blood of any well-regulated household.

Gradually as the sons induced their parents to view the sport themselves, the prejudice wore away. The game finds favor in schools from Maine to California, and the result is a generation of lads growing up whose physical beauty and healthful condition put us of the last generation to shame. Our very sixteen-year-old stripling can outrow, outrun, outswim, outride and outdrive us; give us points on foot-ball, base-ball and tennis; and happily devoid of that sickly pallor peculiar to the student of our day, knows quite as much, with the ruddy glow of health in his cheeks. And yet there are to be found some few that do not favor athletics for boys!! The glorious influence for good that sports have on the general education and welfare of both boys and girls has not begun to be appreciated. When I see a boy who does not take his play-hour, I regard him with as much disquiet as the man who never has a kind word for any one. Play is as necessary to the boys and girls as water is to a plant. Without it the growth of the one is restricted and unhealthful, while the other, having fewer resources, dies. — From *Harper's Weekly.*

COUPARD'S TREATMENT FOR CORYZA.

Dr. Coupard publishes in the *Monde Therapeutique* the following formula for a snuff which has been for a long time very successful in the treatment of coryza:

℞ Cocaine hydrochlorate.....cgm. 15.
Menthol..... " 25.
Boric acid..... gm. 2.
Coffee, parched and finely pulverized....cgm. 50.
Mix. Sig. Take five or six good pinches, as a snuff, a half dozen times daily.

CORRESPONDENCE.

ARE COLDS CONTAGIOUS?

EDITOR MEDICAL AND SURGICAL REPORTER:—Alluding to an article "Are Colds Contagious?" quoted in the REPORTER from the *Medical Press*, I would offer the following. Like all true Buffalonians I have been very subject to nasal and pharyngeal colds, but for the last two years, following the advice of the late Dr. Frank H. Potter of this city, I have used for myself and others a spray of menthol in liquid cosmoline as soon as the first symptoms of coryza have appeared. This treatment has, with few exceptions, aborted the colds.

Unless menthol has some mysterious virtues aside from its well known antiseptic and carminative action, a very natural reasoning from effect to cause would lead to the conclusion that the colds thus treated were of bacterial origin. This theory is corroborated by observing the little "epidemics" of coryza which frequently occur. But why should we expect to find a specific micro-organism any more than in the case of septicæmia, which may depend on one or several of quite a variety of bacteria?

A. L. BENEDICT, M. D.,
Buffalo, N. Y.

PERISCOPE.

THERAPEUTICS.

WARM ETHER AS AN ANÆSTHETIC.

We learn from the *Independencia Medica*, of Barcelona, that on October 31st Dr. Giné y Partagás performed an operation for osteoma of the fibula of a woman, in the Hospital de Santa Cruz of that city, the anæsthetic used being ether warmed to 31° C., which was administered by Dr. A. Diaz de Liaño, with an apparatus of his own invention. Anæsthesia was rapidly induced, and was kept up for fifty-five minutes without any accident. The temperature of the ether remained at 31° nearly to the end, when it fell to 29.5°. The apparatus, which is called by its inventor an "Electro-thermo-etherizer," has since been used in several other cases with equally satisfactory results, anæsthesia having on one occasion been kept up two hours and a half without any ill effect. Dr. Diaz de Liaño claims that by his method the disadvantages both of cold ether and of chloroform are obviated. Our contemporary promises a full description of the apparatus at an early date. —*Brit. Med. Jour.*

TREATMENT OF INFLUENZA.

Dr. Francis Delafield stated at the meeting of the Medical Society of the County of New York, on Monday, January 25th, 1892, during a discussion on the epidemic of Influenza, that his treatment of influenza consisted of putting the patient to bed and seeing that he was well nursed and had proper diet while the disease was running its course. It was possible, however, for the physician to interfere with advantage in the case of certain complications. Of all the remedies suggested for the treatment of influenza and its complications, such as severe headache and neuralgia pains, etc., he had found nothing so reliable as phenacetine, in doses of five grains every two hours. The catarrhal throat trouble, which is often present, he had treated successfully with aconite or salicylate of soda, with a solution of cocaine for local applications.

TREATMENT OF BRONCHO-PNEUMONIA IN CHILDREN BY SUBCUTANEOUS INJECTIONS OF THE HYDROCHLORATE OF QUININE.

In the *Journal de Médicene de Paris*, June 21, 1891, Dr. St.-Philippe calls attention to the difficulty in diagnosis between pneumonia complicated with enteritis and typhoid fever, while from the point of view of treatment he points out that there are two features which are valuable indications as to the methods to be pursued. First, as to the degree of bronchitis; and second, as to the extent of the pulmonary lesion, for the congestive process may be so sudden and expensive as to produce death in a few hours. Against this latter form of danger Dr. St.-Philippe maintains that there is no drug which can equal quinine, whether administered by the mouth, the rectum, or under the skin. Sulphate of quinine he gives in black coffee, while in very small children of those who refuse to take medicine it may be employed in enemata or powders; but both these modes of medication are slow in action, and for entire reliability he usually recommends the employment of quinine in subcutaneous injections, making use of a solution of chlorhydrate of quinine and equal parts of glycerin and water. Quinine thus forms his main reliance in the treatment of broncho-pneumonia, to which may be added blisters, which he even allows to pass on to suppuration over the localities where râles are most abundant. In suffocative catarrh he has recourse to mustard plasters, large blisters or leeches, according to

the age of the child; while in some cases he employes tincture of aconite root in doses of 5 to 20 drops in twenty-four hours, and in syrup of aconite in cases where the bronchitis is intense, while quinine and punch are given when the general state is at all depressed. In states of excitement he does not advise the use of opium, but warm baths and small doses of antipyrin. In severe cases, quinine and aconite are to be abandoned, and caffeine given subcutaneously, and reliance placed upon digitalis and alcohol as stimulants. He likewise states that oxygen inhalations have given better results than injections of ether. —*Therapeutic Gazette.*

When administering chloroform note the action of the heart, but watch the respiration especially.

CAMPHORATED SALOL IN DISEASES OF THE MIDDLE EAR.

Dr. Pégon has recently reported in the *Revue de thérapeutique* some very favorable experiences with camphorated salol in the treatment of suppurative disease of the middle ear. The formula for the preparation, devised by M. Desesquelles, is as follows: Equal parts of salol and camphor are mixed and heated until fusion is complete, without water, alcohol, or any other solvent. The mixture is then filtered and preserved in a yellow glass bottle hermetically sealed. Thus prepared, camphorated salol is a thick, colorless, unctuous liquid, soluble in ether, chloroform, or oil, but insoluble in water. Light and air decompose it rapidly. Its application is neither painful nor irritating, and it seems to possess the property of rapidly curing a distressing and very intractable disease. It is applied upon a small pledget or tampon of cotton-wool; to this may be attached a fine thread by which the patient can remove it after twenty-four hours. The ear should previously be washed out with a weak boric-acid solution, and the washing should be repeated once or twice daily when the tampon is not in position. The applications are made once in two or three days, and, if the suppuration is not profuse, the tampons may be left *in situ* from one application to another. The time required for a cure varies from four to twenty days. Dr. Pégon has found the method to succeed where the more popular ones have failed, and says that even where it has not made a perfect cure it has always diminished the fœtor and amount of the purulent discharge.

TREATMENT OF HEADACHE.

Dr. C. W. Suckling of Birmingham (*Birm. Med. Rev.*), after dealing with the varieties of headache, directs attention to the indications for treatment in migraine. Care must be taken to place the patient in the intervals of the attacks under favorable conditions. Tobacco, alcohol, and especially mental worry, must be forbidden; hot and crowded rooms must be shunned; errors of refraction should be corrected, and the patient's diet strictly regulated. A pill twice daily continuously consisting of one-sixth of a grain of the extract of Indian hemp, one-tenth of a grain of phosphide of zinc, and one-thirtieth of a grain of arsenic may often give great relief. The severity and number of the attacks is often effectually diminished by one minim of liquor trinitrinæ two or three times daily after meals, continuously. For the actual attacks, rest in bed in a dark room may be necessary; and relief may be secured by a draught every hour consisting of ten grains each of antipyrin and ammonium bromide with twenty minims of sal volatile. The dyspeptic headache is usually removed by blue pill and euonymin.—*Practitioner.*

When alcohol and water are mixed the combined volume is less than the sum of the two liquorsseparate.

THE ACTION OF OREXIN ON THE STOMACH.

Dr. W. Brunner, in *Gazette Lekarska*, March 14, 1891, gives his experience with the use of orexin, and its action upon the stomach.

His experiments were made upon 30 persons (180 separate observations). The doses employed were 0.25 to 0.30 gramme, in pills or capsules, two or three times daily.

In four healthy persons pain in the epigastrium and vomiting appeared after the second dose was taken.

In twelve neurasthenic and hysterical patients, with impaired mechanical action of the stomach, the appetite was increased in six; this did not last long, for upon stopping the use of the drug, the appetite became poorer than before, with pain in the stomach and severe ringing in the ears. In another group of 10 cases (patients with consumption, rheumatism and cardiac disease) the effect was also doubtful. In four cases of gastric diseases (1 catarrh, 2 cancer and 1 dilatation), the pain and vomiting were aggravated.

In view of these experiments, the author recommends that orexin be dropped entirely from the list of reliable medicinal remedies.

TO HASTEN DESQUAMATION IN SCARLATINA.

Dr. Jamieson (*Norsk Mag. for Lægevidenskaben*, No. 11, 1891), has employed 30 per cent. of carbolic acid in oil with good results; but resorcine has served him better. This latter is combined with salicylic acid and employed in the form of a superfatted soap. The patients are anointed with this when desquamation begins; after this the skin is rubbed with some indifferent fatty substance. The nurse should wear rubber gloves to protect her hands. With these means the writer has shortened the period of desquamation 55.5 to 40.26 days.

THE NEW TREATMENT OF CARCINOMA.

New methods of treatment designed for the cure of malignant disease are so frequently being brought under the notice of the profession that we feel some apology is due for referring to some facts in connection with this subject which have been supplied to us by our Vienna correspondent. A few months ago Professor Adamkiewicz announced that by means of some experiments he had been able to arrive at a certain method for curing cancer. The excitement which this announcement made in Vienna was such that the Minister of Education was induced to invite the Professor to come to the Austrian metropolis for the purpose of testing his new treatment in one of the State hospitals. In a ward under the charge of Professor Billroth, Adamkiewicz was permitted to experiment upon a patient who was believed to be affected with epithelioma of the upper and lower lids of the right eye. The history showed that the disease was rapidly spreading, and, under the circumstances, therefore, the case seemed a most suitable one for testing the value of the new treatment. On October 25th the Professor took the patient in hand, the result being that on November 12th the sufferer was discharged from the hospital—cured. In other words, after eighteen days' treatment an epithelioma of the upper and lower lids was pronounced by Adamkiewicz to have perfectly cicatrized over. Naturally enough on this matter Professor Billroth had something to say, and what he has said can scarcely be deemed to be enthusiastically favorable to this latest form of cancer curing. Billroth remarked that he had no doubt about the case being one of epithelioma. It was true also that the growth had cicatrized at the centre and in the periphery. But whether it was a growth possessing distinctly malignant characters was open to some doubt. No signs of secondary infection had been noticed, nor was there any enlargement of the nearest lymphatics. Again, it had repeatedly cicatrized after treatment by caustics and "scrapings." Moreover, if the centre only of the growth were scraped, leaving a bleeding surface, healing would take place there, while at the periphery the disease would continue to extend. Upon the whole, then, Billroth contended that Adamkiewicz's treatment had accomplished nothing, and that our knowledge of the subject of the treatment of cancer had not been in any way advanced by these experiments. Professor Kaposi admitted that he had treated the same patient fifteen years ago for the same kind of growth, and obtained a successful result by the application of caustic. He quite agreed with Billroth in the belief that the epithelioma was not a malignant formation in the usual acceptation of the term. He expressed a wish to know how Adamkiewicz performed his experiments—whether the injections were made locally or otherwise. Still more condemnatory of the new treatment were the remarks of Dr. Franks, who spoke on behalf of Professor Albert. According to the latter observer, the experiments conducted in his clinic by Professor Adamkiewicz appeared to have very little influence over the new growths, and he believed that massage or any other mechanical irritation would have the same effect in reducing the size of the tumors. There was nothing, in his opinion, in the new treatment which could be considered of any real value. Thus has this last new method of curing cancer been finally disposed of. We referred to the matter at length in our issue of August 5th in our Austrian correspondence, and from the cases which Professor Adamkiewicz had then recorded it was naturally thought that his method should be submitted to a crucial test. This test has now been applied, with a result which leaves no possible reason for doubting that the treatment in perfectly valueless for the purpose for which it was introduced.—*Med. Press.*

GLYCERIN FOR BURNS.

M. Grigoresen, of Bucharest, highly recommends pure glycerin as a remedy for burns. On first application a slight burning feeling is experienced which soon gives away to a local anæsthesia, somewhat resembling that produced by carbolic acid. In severe cases, two or three applications should be made, so that the parts are kept wet constantly with glycerin. Under this treatment the inflammation is subdued almost completely, and only a slight cicatrix is usually left.

MEDICINE.

TYPHOID FEVER AND INSANITY.

M. Joffroy reported four cases of interest. The first was that of an old woman who had typhoid fever at the age of 33, with nervous troubles and delusions during convalescence. In the second case the patient had been subject to attacks of hysteria formerly; occasional delusions during attacks of typhoid, some of which persisted, Third case was one of typhoid fever, followed by dementia. Fourth case was one of paraplegia preceded by typhoid fever, which appeared to exist in a latent state. M. Weill thought that typhoid fever poison was no more powerful in producing insanity than that of any other infectious diseases. To this view M Joffroy dissented.—Report of Congress in *Le Prog. Méd.*

"CÆCITAS SYLLABARIS ET VERBALIS, SED NON LITTERALIS."

Under this title Professor Ivan P. Mierzejewski, of St. Petersburg, describes (*Vestnik Klinitcpeskoi ï Südebnoi Psïkhïatrïi ï Nevropatologïi*, vol. ii, 1891, p. 26) a case of peculiar word blindness with normal letter vision. The patient was very nervous, emaciated, pale, and weakly-built medical man, aged 56, suffering from pronounced sclerosis of the temporal vessels, pulmonary emphysema, cardiac hypertrophy, chronic bronchitis, and chronic nephritis. When 23 years of age he had had syphilis. In January, 1890, he suffered from dropsy and uræmic drowsiness of four or five days' duration. The latter condition subsequently recurred twice at intervals of about two months. Shortly after the third attack of somnolence the patient noticed that he was unable to read, though he could distinctly differentiate letters, and his sight was otherwise good. At present examination shows that he actually can differentiate every individual letter, but utterly fails to combine letters into syllables or words. He can write to dictation freely and correctly, but is unable to read what he has writlten, Similarly he writes his prescriptions correctly, but is unable to verify their composition. He can copy anything perfectly well, but without understanding either the original text or the transcript. Meanwhile, he reads and understands figures, being able to name correctly even numbers of many figures. His sight is excellent, the ocular fundus absolutely healthy, speech distinct and generally normal, his mental faculties unimpaired, and there is nothing abnormal about his motor, reflex, or sensory functions.—*British Medical Journal.*

FACIAL HEMIATROPHY.

The *Neurologisches Centralblatt*, No. 15, 1891, contains abstracts of several cases of facial hemiatrophy. The first is recorded by Borgherini (*La Psichiatria*, viii, fas. 3 and 4). The patient was a man, aged 63. He had had chronic inflammation of the right lachrymal gland, which was incised. Shortly afterwards he developed localized pain in the right orbit, creeping sensations and a feeling of numbness in the adjacent skin, chronic contraction of the right forehead and face muscles, atrophy of the tissues on the right side of the face, and opacity of the cornea. This condition was on the left limited by the middle line of the face and on the right by the anterior border of the temporal and masseter muscles. The second case is recorded by Muratow (*Vratch*, 1891, No. 25). It is that of a woman who sought advice on account of cramp in the muscles of mastication. This began on the right side and had a clonic character at first, but soon became bilateral and tonic. There was atrophy on the right side of the face, affecting both the lips and the tongue. There were no electrical alterations in the muscles. There were several pigmented spots on the side of the face, and the skin had the appearance of scleroderma, but this condition had appeared before the cramp in the muscles. The third case is by Jankau (*Deut. med. Woch.*, 1891, No. 26). The patient, a girl aged 22, had for two years noticed great pallor with yellow pigmentation and atrophy of the right side of the face, extending over the distribution of all three branches of the trigeminus, and she had lost much hair on the affected side. About the time of the appearance of the hemiatrophy the patient began to suffer from enlargement of the thyroid and ozæna. The next case is recorded by Dixon (*Dublin Journ. of Med. Science*, February, 1891). In a boy, aged 11 years, there followed upon a violent blow over the left hip scleroderma of the left half of the body, the left side of the face, and the left extremities, with atrophy of the affected arm and leg, hemiatrophy of the face, and alopecia of the left half of the body. The last paper is by Girard (*Revue Méd. de la Suisse Romande*, 1891, No. 6). He cut through the sensory portion of the trigeminus in the skull in dogs, and this was followed by hemiatrophy of the face, atrophy of the muscles of mastication, thinning of the skin, atrophy of the bones and of the tongue on the same side. He therefore concludes that the trophic fibres for the face run in the trigeminus and not in the facial nerve.—*Brit. Med. Jour.*

LARYNGEAL PARESIS AFTER INFLUENZA.

Dr. Marcellin Cazaux records a case (*Rev. Gén. de Clin. et de Thér.*, June 10th, 1891) in which paresis of the glottis-openers followed influenza. The patient was a girl, aged 21, who, with the exception of two or three slight and transient attacks of aphonia, had enjoyed good health till December, 1889, when she suffered severely from influenza. In the course of the attack she began to suffer from dyspnœa with inspiratory stridor, and, after her recovery from the influenza, this symptom persisted till July, 1890, when she came under the notice of Dr. Cazaux. The dyspnœa was always well marked, but there were from time to time alarming exacerbations. The voice was clear and expiration was unobstructed. No cause of compression of the trachea, bronchi, or recurrent nerves could be discovered, and the thoracic organs appeared to be sound. On laryngoscopic examination, it was seen that the ligamentous part of the glottis opened incompletely during inspiration. The diagnosis of paresis of the crico-arytænoidei postici muscles was arrived at, and the following treatment ordered: Daily applications of the continuous current to the recurrent nerves, and sulphate of strychnine in 1 milligramme pills—from four to ten of these to be taken daily till intolerance was manifested. In three months the patient was completely cured.—*Brit. Med. Jour.*

A REMARKABLE CASE OF EMPYEMA.

Dr. Felix Szontagh publishes in a Hungarian medical journal a remarkable case of empyema. A little girl of six years old exhibited symptoms of fever; the temperature was 99.5°. The author saw the patient two days after the commencement of the illness, and diagnosed pneumonia of the left lower lobe. Later on symptoms of pleuritic effusion became prominent, although bronchial respiration was audible over the whole half of the thorax. The apex beat was at the right border of the sternum. Nine days later on, an experimental puncture was made in the sixth intercostal space in the middle axillary line. Pus was found, and the next day Dr. Verellélyi made an incision. After a discharge of three ounces of non-fetid pus a drainage-tube was inserted, the thorax washed out with a 30 per cent. tepid solution of boracic acid, and the wound dressed. So far the case presented nothing remarkable, but the author had during the operation been surprised by the relatively small quantity of pus. The state of the patient did not alter, although she was free from fever during the whole day after the operation, and the following evening the temperature had not risen higher than 101.3°. A profuse discharge of pus took place at the next dressing, so that consequently a retention of pus could not be suspected. On the third day the patient got worse, and the previously existing cyanosis increased. During the next three days, however, the patient seemed to improve again, the appetite became better and her general state more satisfactory, but the examination of the chest indicated the presence of some complication. The apex beat was still in the right mamillary line, and it was suspected that, independently of the first effusion, a second had been formed. This suspicion became stronger on observing the remarkable dulness, especially in the upper lobe. A week after the operation, on changing the dressing the secretion was most profuse, and the author concluded that two puriform cavities communicated with each other. The discharge had, however, decreased again the next day. A new experimental puncture was then made in the fourth intercostal space, and although the patient was exceedingly thin the needle had to penetrate to a depth of twenty-two millimetres before any pus was reached. A free opening which was made the next day completely justified the author's expectation, as a pint of pus was discharged. This contained no Koch's bacilli, but diplococci, resembling pneumococci, partly free and partly embedded in leucocytes. The case then progressed most favorably towards recovery. When the patient was shown to the Medical Association, the left lung was not quite fully dilated, as the percussion sound was slightly muffled and the respiration in the lower posterior part of the lung weakened. The deviation is visible at the spine, but hardly present in the thorax, though the circumference of its left half is a centimetre less than that of the right. The case is remarkable for the presence of a multilocular suppurative pleurisy, the correct diagnosis made, and the perfect recovery of the patient. The author presumes that the empyema was formed at the beginning in two places, or that the separation into two cysts took place at a very early stage of the case. If the first operation had been delayed until the formation of pus had reached its maximum, the bilocular nature of the effusion might very easily have been overlooked, and the chances of a recovery considerably lessened. The author repeats his old maxim, "Ubi pus ibi evacua."—*Lancet.*

BACTERIOLOGY OF YELLOW FEVER.

Domingo-Freire has described the amaryl microbe, or cryptococcus xantogenius, which is round and has a diameter of one-thousandth of a millimetre. This micro-organism is only found in the tropics. Quite often the cryptococcus is arranged in little chains; in cultures it gives rise to yellow and black pigments. The former is soluble, and stains the skin of persons with yellow fever; the latter gives color to the vomited matter. When the blood of yellow-fever patients or a culture of the microbes is injected into guinea-pigs, yellow fever is produced; the ptomaines only produce certain symptoms. Transplantation attenuates the cultures, and it is possible to protect the human system from the malady. Inoculation produces a group of phenomena which are similar to those of the invasion of yellow fever; in forty-eight hours the symptoms have disappeared. Sometimes icterus is produced. Domingo-Freire has made a large number of inoculations; the average mortality of inoculated subjects is four-tenths of one per cent.—*L' Union Méd.*, Sept. 5, 1891, p. 347.

SURGERY.

RESULTS OF EXTIRPATION OF THE LIVER.

In a preliminary note Dr. von Meister confirms from his own experimental observations some of the results previously obtained by Ponfick of the remarkable degree of reparative power exhibited by the liver, and applicable doubtless to other glands in greater or less degree. Thus he finds that in the dog and cat, as well as in the rabbit, the removal of more than three-fourths of that organ is not followed by any serious consequences, and that within the space of thirty-six days repair has advanced to such an extent that the weight of the organ is regained. This regeneration is effected partly by hypertrophy of the hepatic cells, but mainly by their hyperplasia; but new lobules are not formed, and biliary ducts as well as blood vessels share in the new formation. Observations were also made upon the effect of extirpation of such large portions of the liver upon the excretion of urea. It was found that the total quantity of nitrogen notably diminishes, but not in proportion to the nitrogen of the urea, so that the proportion of the latter to the whole nitrogenous excretion is decreased. On the other hand, the amount of extractive matters is increased, and their nitrogenous constituents appear in greater proportion than normal to the total nitrogen. The diminution in urea is proportionate to the amount of liver substance removed, total extirpation of the organ leading to a very marked decrease in urea. It was further found that after partial extirpation—within a period of from eleven to fifteen days—the quantity of urea rises until it once more attains the normal degree.—*Lancet.*

EXTIRPATION OF VARICOSITIES FOR ULCER OF THE LEG.

M. Quenu stated recently to the Societe de Chirurgie that he had a report from M. Carne who had operated on a woman of 30 by removing a large varicosity and the internal saphenous vein for ulcers of the leg. Cure occurred in three weeks and complete disappearance of the ulcers shortly afterward. The pathology of these ulcers is claimed by some to be due to a periphlebitis, whereas others claim that paralysis of the vaso-motor nerves is concerned in their production. For this latter reason the removal of the veins is discountenanced by some, except in such cases where extensive ulcers and marked varices exist.

SUTURE IN SIMPLE FRACTURE OF THE CLAVICLE.

Dr. Poirier holds that in certain cases of simple fracture of the clavicle it might be found advisable to expose the injury by incision, and to apply a ligature either of silver wire or silk in order to keep the fragments in good position. This operation, which was first performed by Langenbuch in 1882, has since been much criticised. A recent case is reported in which Dr. Poirier made an incision over a simple comminuted fracture of the left clavicle, removed a detached osseous splinter, and fixed together by silver wire the two main fragments of bone. He describes certain features which would, in his opinion, indicate, in recent fracture of the clavicle, treatment as above. He mentions cases of severe subcutaneous injury of the vessels or nerves of the neck, in which it has been found necessary to make an incision in order to arrest hæmorrhage, or to search for a divided nerve; the broken bone being thus exposed might be sutured without any further risk. This treatment, it is held, is indicated also in cases of comminuted fracture with one or more displaced fragments, which might, in course of time, give rise to some disturbance of the brachial plexus, or result in the formation of masses of callus, in which the subjacent nerves are involved.—*Semaine Médicale.*

THE OPERATION FOR CLEFT PALATE IN TWO SITTINGS.

In a note read at one of the summer meeting of the *Société de médecine de Paris*, published in the *Union médicale* for November 21st, M. Polaillon recommends this procedure as being less fatiguing to both patient and operator. At the first sitting he traces the lateral incisions, frees the mucous membrane, scrapes the bone, and checks any hæmorrhage there may be by compression, sometimes with a hæmostatic forceps. On the next day or the day after he refreshes the flaps, which are now somewhat swollen and tend to approach the median line, and then inserts the sutures, with the great advantage that the hæmorrhage is trifling. He thinks this method insures success even in the most difficult cases.

THE RESULTS OF TREATMENT OF SIMPLE FRACTURE OF THE SHAFT OF THE FEMUR.

At a meeting of the American Surgical Association held in May, a committee consisting of several representative surgeons of the United States was formed with instructions to report on what, in their opinion, might be considered satisfactory results of ordinary treatment of fracture of the shaft of the femur. The report, which is published in the Philadelphia *Medical News* of September 26th, deals with the points of bony union, of the relation of the long axes of the fragments, of correspondence of the anterior surfaces of the fragments, of the length of the injured limb, and of lameness, and concludes with the following summary: A satisfactory result has been obtained in the treatment of fracture of the shaft of the femur when (1) firm bony union exists; (2) the long axis of the lower fragment is either directly continuous with that of the upper fragment, or the axes are on nearly parallel lines, thus preventing angular deformity; (3) the anterior surface of the lower fragment maintains nearly its normal relation to the plane of the upper fragment, thus preventing undue deviation of the foot from its normal position; (4) the length of the limb is either exactly equal to that of its fellow, or the degree of shortening falls within the limits found to exist in 90 per cent. of healthy limbs—namely, from one-eighth of an inch to one inch; (5) lameness, if present, is not due to more than one inch of shortening; (6) the conditions attending the treatment prevent other results than those obtained.—*Brit. Med. Jour.*

THE FORMATION OF A GASTRIC FISTULA IN CANCEROUS STENOSIS OF THE CARDIAC END OF THE STOMACH.

Dr. Lauenstein advises that in cases of marked cancerous stenosis of the cardiac end of the stomach, it is better not to resort to formation of a gastric fistula. He has had two cases of carcinoma of the cardia, in which access to the stomach was prevented by the tumors which were situated under the diaphragm. The neoplasms had invaded the mucous membrane of the stomach, which had to a great extent lost its digestive functions. It may also happen that the stomach is so firmly fixed by adhesion of the tumor at the cardia that the formation of a fistula is attended with great difficulties. For these reasons the author prefers rectal alimentation in this class of cases. A cancer of the cardia should be suspected if the œsophageal bougie encounters resistance at a depth of 38 to 41 centimeters from the teeth. In one of his cases the author noted a loud systolic sound in the epigastrium, synchronously with the pulse, which the autopsy showed was due to pressure of the tumor on the aorta.—*Centralbl. f. Chirurgie.*

THE RESTORATION OF DEFECTS IN TENDONS.

Kümmel (*Weiner medizin. Présse*, No. 43, 1891) has reported the case of a coachman who, while managing a pair of balky horses, perceived a sense of pressure, followed by severe transitory pain, involving the whole of the left arm. Shortly thereafter a swelling appeared in the region of the left wrist-joint, the functional activity of the hand, however, remaining unimpaired. Several hours later severe pain in the left arm appeared. The thumb hung limp, and could be neither adducted nor extended; it felt numb and cold. The injury was considered a luxation, and treated by means of applications of lead-water. At the end of three weeks there remained no doubt that the extensor pollicis longus had been ruptured. Upon opening the sheath of the tendon it was found that the central extremity had retracted to the middle of the forearm. The distal extremity lay rolled up on the metacarpal bone of the thumb. Attempts to approximate the two segments proving unsuccessful, the diastasis of almost four inches was supplied by moderately strong, twisted silk thread. The wound in the skin was closed, and the extremity was dressed in hyperextension. The first change of dressings was made at the end of two weeks, the position of hyperextension being from time to time

gradually relaxed. At the end of six weeks the splint was permanently removed, and movement was carefully instituted. In the course of four weeks more the patient was able to use the thumb with considerable force. The case demonstrates the possibility of replacing defects of tendons by non-vital structure, with restoration of function. It is possible that the silk threads furnish a guide and support for the connective tissue that is to replace the defect.

OBSTETRICS.

HISTOLOGICAL STUDY OF PUERPERAL ENDOMETRITIS.

Bumm (*Archiv für Gynäkologie*, Vol. xl, Section Third, 1891) contributes an article on puerperal endometritis, studied from a histological standpoint. He describes puerperal infection according to the method of invasion; in other words, according to the highways by which the infecting germs find entrance into the organism, whether through the finer lymphatics lying between the fibres of the uterus, or through the larger lymphatics or through the uterine veins when thrombi are present (puerperal pyæmia). This is contrary to the recent classification of Vidal, who describes the various forms of infection according to the influence of each upon the tissue affected—namely, the purulent, the diphtheritic and the septicæmic form.

It has long been known that the entrance of septic material occurs principally through the endometrium. This is shown by the readiness with which the early symptoms of infection are controlled by local treatment, in the form of uterine douches. The foul, infiltrated appearance of lesions of the vulva and vagina during puerperal infection is not due to local irritation at the site of invasion, but to the effects of the general process. The writer wishes, however, to call attention to the different processes affecting the endometrium in the different forms of infection. He describes, first, a putrid endometritis, in which the saprophytic micro-organisms are found, while those characteristic of septic process are absent; second, a septic endometritis, in which streptococci are present in abundance, and which offers for consideration two distinct processes—namely, a localized, septic endometritis, without a general infection, and a local process accompanied by a spread of the septic material through the general organism by means of the lymphatics of the uterus.

An important distinction in all these forms is the occurrence of what the writer designates as the granulation zone. In the first form a zone of infiltration, marked by the accumulation of small, round cells, divides the affected tissue from the deeper lying muscular tissue. The necrotic endometrium is thus cast off, and the uterus is freed from the local process. In the localized septic form the reaction zone also protects the organism from invasion, while in the form accompanied by general infection the micro-organisms find their way into the muscular tissue of the uterus, and hence to the peritoneum by means of extension along the lymphatics without the appearance of any local reaction.—*Univ. Med. Mag.*

AN EFFECTIVE METHOD FOR THE INDUCTION OF ABORTION.

Ræther, at the September meeting of the Hamberg Obstetrical Society (*Centralblatt für Gynäkologie*, No 42, 1891), advocates the following plan of inducing abortion: Under ether, dilate the cervical canal; clear out the uterine cavity with the finger and, if necessary, a placental forceps. Scrape the placental site with a dull curette, and pack the uterine cavity with iodoform gauze, leaving an end projecting from the crevix to secure drainage. Done aseptically, this method is safe, effective and rapid, and does not show the patient and bystanders how they could perform such an operation themselves in another case.—*Univ. Med. Mag.*

ANTISEPSIS: PUERPERAL MORTALITY IN PARIS HOSPITALS.

Our own correspondent in Paris last week gave interesting particulars confirmatory of the immense benefits conferred on parturient women by the application of antisepsis to obstetrics. We commend the account to the careful attention of our readers. He says, out of 1340 women delivered in Prof. Tarnier's wards during the past academical year, only fourteen died, thus giving a very satisfactory mortality of 1 in 95, or 1.04 per cent. Eight years ago the mortality calculated on the same number of cases reached 2.50 per cent.; while, thirty years ago, one parturient out of eleven, or 9 per cent., died. These figures prove conclusively that modern methods of conducting labor are responsible for the saving, in his wards alone, of 100 valuable lives per annum. This is a very gratifying report of progress and advance, and perhaps our correspondent is right in

thinking that the virtue of antisepsis can go no further. Puerperal fever is now unknown in the wards of M. Tarnier, whose memory goes back to a time when he witnessed five deaths in one day from puerperal peritonitis; but there is still room, perhaps, for better results if we may judge from the experience of some of our London lying-in hospitals. In one of these, during the years of 1888 and 1889, there was but one death in 1272 successive deliveries.—*Lancet.*

ETIOLOGY OF HYPEREMESIS GRAVIDARUM.

Keil (*Münch. med. Woch.*, October 13th, 1891) records a case in support of Kaltenbach's view that the vomiting of pregnancy is, in the absence of any pathological cause, not infrequently hysterical in character, and to be treated as such. His patient, aged 26, although a sensitive, irritable woman, had never shown definite symptoms of hysteria. Soon after marriage severe morning sickness set in, without any local causative condition, and unaffected by the usual remedies. Rapid emaciation and debility followed, with fainting attacks, almost every meal being rejected soon after it had been swallowed. On examining his patient with the idea that she might be suffering from hysteria, Keil found conclusive evidence. The ovaries were tender; there was partial anæsthesia of the left arm; pressure over the sensitive second rib caused deglutition movements and coughing, all of which satisfied him that the vomiting was hysterical. The treatment adopted was by suggestion, the patient being told that a newly discovered unfailing remedy (ingluvin) would be given her, and that by washing out the stomach the source of her trouble would be removed, by dieting her on ice and milk, and by isolating her from her relatives. These means proved entirely successful; the vomiting ceased, her general condition improved, and she gained considerably in weight. The symptoms and the results of treatment alike proved the hysterical nature of the vomiting, which had evidently broken out during pregnancy in a woman who was disposed to neuroses.—*Brit. Med. Jour.*

During the progress of the Hyderabad experiment (says the *Hospital Gazette*), several female monkeys were fitted with apparatus to resemble the feminine corset, and chloroform administered. Two died promptly, and the others were saved with difficulty.

GYNÆCOLOGY.

ETHER INJECTION AFTER ABORTION: TEMPORARY PARALYSIS.

T. Féaux, of Gondelsheim (*Centralbl. f. Gynäk.*, November 14, 1891), was called to a patient who had aborted. When he arrived she was greatly exhausted, having lost much blood. The process of clearing the uterus thoroughly of its contents proved difficult, and at the end of the necessary manœuvres serious collapse occurred. Two hypodermic injections of ether were made in the posterior aspect of the upper third of the left forearm. On the second day the patient complained of a sensation of numbness in the left hand. On investigation it was found that the middle, ring, and little fingers were flexed and could not be extended at will. At the end of a month the paralysis remained unchanged; electricity had not yet been tried. The part was now galvanized, and within four weeks recovery followed. Féaux adds that, even at the end of a year, the affected hand remained weak, so that it was easily fatigued. *Brit. Med. Jour.*

THE INFLUENCE OF OBESITY ON THE FEMALE SEXUAL FUNCTIONS.

Dr. Juan Maria Rodriguez writes on the influence, in Mexico, of obesity on menstruation, conception, pregnancy, childbirth, and the puerperium. Fat women are generally irregular in their functions. Menorrhagia is rare; dysmenorrhœa is common. So is amenorrhœa, simple and exfoliative. Amenorrhœa and dysmenorrhœa often alternate. Temporary suspension of the menses is often mistaken for pregnancy, aided by desire and imagination, which latter the author calls "a crazy woman residing in the brains of every one who thinks." Obesity is often a cause of sterility by producing fatty degeneration and atrophy of the ovaries and uterus. Obesity may favor miscarriage, through compression and disturbance of the circulation; it may be a cause of prolonged and difficult childbirth, by impairing the tonicity and contractility of the muscles, and retarding likewise the expulsion of afterbirth, and necessitating bandaging and compression of the stomach after its expulsion. Fat women are considered to be bad wet-nurses.

Obesity is a complaint of rich women. Behier told one of his rich clients, who complained of obesity, to live on three francs, but to earn them by her own work.

In the treatment of obesity, amylaceous food should be abandoned; exercise and steam-baths are useful. Sterility caused by obesity may be relieved by removing the cause.—*Gaceta med. de Mexico*, vol. xxxvi, 1891, p 289.

PÆDIATRICS.

ON VISCERAL HÆMORRHAGES IN STILL-BORN CHILDREN; AN ANALYSIS OF ONE HUNDRED AND THIRTY NECROPSIES.

Spencer (*The Lancet*, June 20, 1891) in a paper giving a detailed account of a consecutive series of one hundred and thirty necropsies, on fresh, mostly still-born, fœtuses, discusses the causation of the hæmorrhage, and reaches the following conclusions:—

1. In children still-born, or dying shortly after birth, congestion or œdema, and hæmorrhages are usually found in various important viscera.

2. These hæmorrhages occur in cases delivered either naturally or by version, or by forceps, through normal or abnormal pelves; in primiparæ and multiparæ; with large and small children; in "easy" and difficult, rapid and prolonged labors.

3. These hæmorrhages are, however, most frequent and severe in children subjected to much pressure by the parturient canal, or instruments, or the hand of the attendant, especially when delivered by the lower extremity.

4. Cerebral hæmorrhage is more frequently found in still-born children delivered by the forceps than in those born by the breech, and in these latter more frequently than in those born naturally by the head.

5. Hæmorrhage into most of the other viscera is more frequently met with in pelvic than in cephalic presentations.

6. These hæmorrhages and the accompanying injuries are in many cases the cause of still-birth, and when not immediately fatal may be followed by the gravest consequences.

7. They are most likely to be avoided by preventing premature rupture of the membranes, by artificial dilatation of the parturient canal (when necessary), by restricting the employment of version and other artificial manipulations to urgent cases, and by preferring cephalic to podalic version in cases suitable for the former.

8. The use of the forceps should be absolutely limited to cases in which there exists some pressing danger to mother or child, and it should never be employed merely to shorten the time of labor.

9. In breech presentations, examinations of the genital organs of the child should be carefully avoided during delivery. As soon as the child's limbs are born they should be wrapped in a thick layer of antiseptic wool. If traction be necessary it should be made over wool wrapped around the child's limbs or pelvis. It should never be made by the hand around the child's waist.

10. In delivering the after-coming head, care should be taken that the sterno-mastoid muscles are not unduly stretched or pressed upon. When the after-coming head is in the pelvis, where there is even slight difficulty, resort should be had to the forceps.

COMMON THYME IN WHOOPING-COUGH.

Common thyme, which was recommended in whooping-cough three or four years ago by Dr. S. B. Johnson, is regarded by Dr. Neovius, who writes a paper on the subject in a Finnish medical journal, as almost worthy of the title of a specific. During an epidemic of whooping-cough he had ample opportunities of observing its effects, and he came to the conclusion that if it is given early and constantly it invariably cuts short the disease in a fortnight, the symptoms generally vanishing in two or three days. They are liable to return if the thyme is not taken regularly for at least two or three weeks. He gives from one ounce and a half to six ounces per diem, combined with a little marshmallow syrup. It may produce a slight diarrhœa. It is important that the drug should be used quite fresh.—*Amer. Jour. Med. Sci.*

ETHERIZATION IN LARYNGEAL CROUP.

Dr. Betz reports the case of a child, aged eighteen months, that presented the typical symptoms of laryngeal croup. The case appeared so hopeless that tracheotomy was, although proposed, rejected. Dr. Betz then proposed "etherization." Three drops of a mixture of ether sulph. 3 parts, acetic ether 1 part, menthol 0.1 part, were ordered to be inhaled every quarter of an hour, just as chloroform is inhaled. It was hoped that the cold from the evaporating mixture would contract the surface blood-vessels of the larynx, and thus reduce the œdema present. The child was seen again in two hours, and the condition had somewhat improved. The etherization to be continued, three to four drops every half-hour. After six hours the

condition was unmistakably better, so much so, in fact, that the etherization could be dispensed with. A piece of intestine filled with ice was placed around the child's neck. After this progress was so rapid that in twenty-four hours the child was out of danger. —*Memorabilien.*

HYGIENE.

ON TAKING FLUID WITH MEALS.

A great deal of misapprehension is often found to exist in the popular mind in regard to matters of eating and drinking; the cause of this, to some extent, is to be traced to old-time sayings which have come down to us in the form of a concentrated infusion of somebody's opinion upon a subject of which he or she was woefully ignorant. One of these misapprehensions to which we may refer is as to the injuriousness of taking fluid with meals. One frequently hears it laid down as a maxim that "it is bad to drink with your meals, it dilutes the gastric juice." By way of explanation we may remark that "it implies that the fluid taken is harmful." Whence this sagacious postulate originally came we cannot tell; it has quite the ring about it of an inconsequent deduction formed by a person whose presumption of knowledge was only exceeded by a lamentable ignorance of the subject. Medical men often find much difficulty in dealing with these museum specimens of antiquated science, for even educated persons are disposed to cling to the absurdities of their youth. Upon this matter Mr. Hutchinson remarks in the last number of his "Archives:" "I observe with pleasure that the verdict of general experience and common sense has been confirmed by scientific experiment in the matter of taking fluid with meals." Dr. Tev. O. Stratievsky, of St. Petersburg, after elaborate trials, has found that fluids materially assist the assimilation of proteids, and announces the following conclusion, which it is to be hoped no future experiments will controvert: "On the whole, the widely-spread custom of taking fluids during or just before one's meals, proves to be rational and fully justified on strict scientific grounds. To take fluids with the meals is almost as important an adjunct to digestion as is the mastication of solid food preparatory to swallowing it." It is obvious, however, that there is a limit to the amount of fluid one can swallow with impunity—not to speak of comfort—just as much with meals as at other times. It would be dangerous to create a general impression that fluid is good with food irrespective of quantity. It is, moreover, a well-ascertained clinical fact that an excess of cumprandial fluid does retard digestion in certain people, and gives rise to discomfort in most. A little attention to one's sensation in such matters will far better fix the desirable limit than all the "data" in the world.—*Medical Press and Circular.*

PNEUMATIC SOLES.

A pneumatic inner sole or sock for boots and shoes has been brought out to confer great benefits upon people who have tender feet, etc. It is made of hollow India-rubber, inflated with air or gas under pressure, the external protective covering being canvas, linen, skin, or other suitable material, to adapt it to withstand the internal pressure of the compressed air or gas.—*Invention, London.*

DOES ETHER ASSIST DIGESTION?

The effect of ether on digestive processes in healthy subjects has been recently investigated by Dr. Gurieff, who gave thirty drops of sulphuric ether to six healthy persons during dinner, which consisted of about half a pint of soup, four ounces of meat, and six ounces of bread. It was found that the ether had the effect of stimulating the action of the gastric glands, increasing the free hydrochloric acid in the gastric juice, and causing the peristaltic movements of the stomach, together with its power of absorption, to increase thus; on the whole exercising a favorable effect upon the gastric digestion. The same result was obtained when the ether was administered by means of hypodermic injections. It would appear, therefore, that the effects must be ascribed to a general rather than to any merely local action on the mucous membrane of the stomach. Dr. Gurieff is disposed to think that there is a stimulation of the cephalic centres. This view is partly based on the observations of other Russian observers—Bekhtereff and Miloslevski and Pavloff and Shumova-Simanovskaya—on the dependence of the gastric functions upon the central nervous system.—*Lancet.*

IODIDE OF POTASH IN URTICARIA.

Dr. Stern (*Norsk Mag. for Lægevidenskaben,* No. 11, 1891) has used small doses of the iodide of potash in five cases of urticaria with successful results.

MEDICAL CHEMISTRY.

PRESENCE OF FATTY ACIDS IN SO-CALLED DEFATTED COTTON.

The *Pharmaceutische Centralhalle* states that M. Leick, having treated a number of specimens of cotton wadding, sold as entirely free from grease, to exhaustion with ether and subsequent distillation, the author obtained in every case a solid etheric extract varying from ½ of 1 per cent. to 1.15 per cent. of the weight of the cotton so treated. This extract reddened litmus paper, and proved to be composed almost entirely of fatty acids, with a minute proportion of resinous matters. The author, continuing his investigations, found that these acids were purposely added by the manufacturers in order to give the wadding a whiter appearance and that crepitant feeling which is peculiar to it. The author concludes that inasmuch as the presence of acids may be an objection under certain circumstances, he would recommend the testing of all "defatted" cotton wadding in the following manner: Weigh out 20 gm. of the wadding, exhaust by ether, and evaporate the latter. After desiccation, the residue should be no more than 3 cg.

IDENTITY REACTION OF PHENACETIN

W. Autenrieth and O. Hinsberg have recently published a paper on phenacetin and certain of its derivatives in the Archiv d. Pharmacie, volume ccxxix., page 456, in which they first communicate a new identity reaction of the substance, and afterwards give the results of their investigations into the nature of the product of this reaction, and into its constitution.

Identity Reaction for Phenacetin.—Upon 1 part of finely powdered phenacetin pour 2 parts of nitric acid containing 10 to 12 per cent of HNO_3 (specific gravity about 1.075), and heat for a short time to boiling. The liquid will assume a yellow to orange color, and the phenacetin, which had at first remained colorless, will at the same time (so far as it is not dissolved) be converted into a nitro compound of an intensely yellow color. When the liquid cools, a further crop of needles of the yellow (or brownish-red) compound crystallizes out.

Antifebrin and antipyrine remain unaffected when treated in this manner.

If concentrated nitric acid is used, however, antifebrin is colored yellowish-red, and antipyrine yields a red solution.

The meeting point of the characteristic yellow derivative of phenacetin, which was subsequently recognized as *mononitrophenacetin*, or $C_6H_3.OC_2H_5(4).NO_2(3).NHCOCH_3$ (1), is at about 103° C.

THE CONSTITUTION OF THE SWEAT.

From a study of the constitution of the secretion of the sudoriferous glands, Gaube, (*Comtes Rend. des Séances de la Soc. de Biol.*, November 6, 1891) has found that the sweat is of acid reaction in man, but alkaline in the horse, the cow, the dog, the cat, and the pig. Both in animals and in man the secretion contains albumen. The total amount of nitrogen in the sweat is greater than that represented by the contained urea; the excess is largely due to the presence of albumen and albuminoids. In man and in animals the sweat contains diastasic ferments, which are called hidrozymases. In man there are three—an amylase, a pepsin, and an emulsin; in the horse there are two: an amylase and an emulsin. The sweat of man contains little amylase, less pepsin, and still less of emulsin, that of the horse and of several other animals contains less hidrozymases than does the sweat of man.

THE ACTION OF PARASITICAL PLANTS ON THEIR HOSTS.

At a recent meeting of the Academie des Sciences, M. Chatin, speaking on this subject, said that all parasitical plants seriously modify the sap of their hosts, totally eliminating some elements, and on the other hand producing other new ones. He cited as examples the loranthus grown on *strychnos nux vomica*, in which no strychnine is found; botanophora grown on cinchona, in which no quinine is found; and, in the oak-mistletoe, green instead of blue tannin is found. On the other hand, substances are found in parasites which do not exist in the trees on which they are found. Thus, mistletoe contains lime, and the dodder produces yellow and red coloring matters. In the broom-rape of hemp and milfoil a blue color is found; in that of the horseshoe vetch, a rich sulphur tint; and in the broom-rape of thyme, an amethyst shade. The mistletoe and most other parasites contain fecula, which penetrates to the fibre of the wood. In short, all these matters are formed by the parasitical plants themselves.

THE presence of the circus poster excites the small boy to deeds of daring and lands him in the hospital cot.

NEWS AND MISCELLANY.

THE HORRIBLE GRIP.

[With apologies to the author of "Beautiful Snow."]

Oh the grip, the horrible grip!
That comes along with an impudent nip,
In head or stomach, with sneaking stealth,
And lays a chap, though in excellent health,
Quite surreptitiously out on his back,
With all of his energy gone, alack!—
Sneezing,
Coughing,
Groaning—a sip
Of the terrible malady known as the grip.

Oh the grip, the horrible grip!
Which doubles one up like a chicken with pip,
And makes him feel as though he should freeze,
Though hugging the stove with close-crossed knees,
And taking quinine grain after grain,
While fairly yelling with internal pain—
Shaking,
Shivering,
Shuddering, too,
Since the grip has a grip till he's fairly blue.

Once I was well as the healthiest man,
With every disease that was known under ban—
Rollicking, jolly and happy, indeed,
As a man with never an earthly need;
But now I shiver whenever I hark,
And growl in a sort of Peruvian bark—
Muttering,
Grumbling,
Swallowing a nip,
So bitter, to drive off the horrible grip.

Oh the grip, the horrible grip!
Wherever it come from, in schooner or ship,
As an immigrant, 'tis the most ruthless of bores,
And ne'er should have landed upon our fair shores.
The ghost of diseases, it stalks on its way,
With a most unrelenting, terrible sway,
Mocking,
Jibing,
Lickety-zip—
Yes, that's the fatality known as the grip.
—*Philadelphia Press.*

WANTED, A CURE.

The influenza is once more in the air, wafted hither and thither throughout the habitable globe, a formidable, disabling and fatal pandemic. Once more we are urgently asked on all sides, "Have we a specific? Can we offer a cure?" It is the old delusion and the everlasting and unreasoning, but excusable, impatience for the miraculous and the impossible. "Disease comes by Providence and goes by medicine;" that is a durable and popular formula. Of specifics for sale there are of course a legion. To sell them is the business of the quacks: the Matteis, the Holloways, the Morrisons abound in specifics. There are a dozen available for cholera, for typhoid, for small-pox, for hydrophobia, for cancer—all equally plausible and equally useless except for commerce—and why not for influenza? But is there a specific for any disease? It is more than doubtful. The more we know of the nature and cause of disease, of its origin and life-history, the less we are inclined even to expect the discovery of specifics. Disease we know not as an entity, an enemy to be struck down with a club, or to be expelled by a drug, but as a process, the change of tissues and of fluids, the growth of a microbe, the proliferation of a cell, the secretion of a virus. We can modify the processes, we can lessen their virulent products, we can fortify against their worst effects; we can aid the evolution and perhaps guide it to health; sometimes we can arrest it; and often we can anticipate it. Thus we know how to ward off many diseases: Cholera, typhoid, small-pox, hydrophobia, they are enemies whom we can meet at the gate and forbid their approach. Deaths from either of these preventable diseases are for the most part violent deaths, inflicted by the ignorance of the people, the neglect of the sanitary authorities. *Populus vult mori.* In their search for specifics they parley with the enemy and they lose their lives. Of influenza we know less than of most other infections; it is aërial, communicable from person to person, and along the lines of travel. For it, as for scarlet fever, we have only isolation as a preventive and palliatives as a treatment. Perhaps one day we shall know more; but there does not seem any likelihood of the discovery of a specific, and, judging from numerous analogies, it is far from certain that there is in this any ground for reproach. At any rate, it comes badly from a public and from a generation which is content to leave Great Britain without even one Institute of Preventive Medicine, and which is left to an appeal for funds from a Lister and a Roscoe to found such an institute—in which lies a chief hope for further life saving and the advance of preventive and curative knowledge—while millions are lavished on weapons of destruction, or the more obvious means of charitable relief to physical suffering; and finally on the purchase of fradulent "specifics."—*Brit. Med. Jour.*

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SUPRA-PUBIC CYSTOTOMY. — UNUNITED FRACTURES—AMPUTATION OF ANTERIOR PORTION OF THE FOOT.

BY JOHN H. PACKARD, M. D.

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The case which I shall present first this morning is one of considerable interest as it illustrates an operation which, practised long ago and then abandoned on account of its supposed dangers, has recently come into vogue again. This old gentleman was brought into the hospital on August 18th, suffering from retention of urine due to a very much enlarged and lobulated prostate; the bladder was distended until it reached far above the umbilicus. We spent very little time in trying to pass an instrument to draw off the water. He was in a wretched condition, and I decided at once resort to supra-pubic cystotomy. This is the easiest of all methods of reaching the bladder, and in cases of enlarged prostate it affords special advantages of which the perineal section is destitute. In this case, the urine flowed away very freely, and the man was immediately and entirely relieved. In order to keep up this condition of relief, a rubber tube was passed into the bladder and his water has been drawn off continuously by that means. Now it will not do for the man always to go with a rubber tube in his bladder, because, as you can readily see, it will be difficult to manage and hard to keep clean. Therefore to-day I am going to try to introduce a curved glass drainage tube; fitted exactly to the bladder in its relation to the wound and to surrounding structures. Such a tube will drain without any trouble, and will not soil his clothes.

The incision which I made in this case was about four inches long, directly over the bladder, the condition of which gave us a perfect indication of the point at which it was to be entered. I cut through the skin and superficial fascia, the deeper layer of the fascia, the rectus and pyramidales, and then came to a layer of fat which was triangular on section; and just below that, the bladder was distinguishable by its grayish-blue color, and by its longitudinal fibres of muscle which are in its wall. At this point I took hold of the bladder with a tenaculum and opened it, so that I could pass the rubber tube into the bladder, as you see. Now I am going to pass the glass tube in and see if it fits perfectly; and if not, I shall have another made. Then I will fasten a rubber tube over the double shoulder which is on the end of the tube, and which it would be well to have on all drainage tubes used after abdominal operations.

On passing this tube I find it is a little too long and would press on the mucous membrane of the floor of bladder, and there is a tendency to push the tube out, due to contraction of the muscular pelvic floor. Pain in the bladder causes this spasmodic action of the levator ani. I will replace the rubber tube for the present and will have another glass tube made, about one inch shorter, and then I think it will fit exactly into the bladder. On this will be put a rubber tube and this will be closed with a clip. With this arrangement, the man will be enabled to go about, and when he feels that the bladder needs to be emptied, he will merely have to release the clip.

This operation was done over three hundred years ago—many times in the last century, and in the early part of this one. But care was not properly taken to avoid injuring the peritoneum or to drain the bladder. So the operation was often complicated by infiltration of urine or by traumatic peritonitis. A very distinguished London surgeon of the last century used to inject water to distend the bladder previous to this operation, sometimes to the point of rupture; and several accidents of that kind having happened, surgeons gave up the supra-pubic for the perineal operation. Now the fact is, that this

operation is very much easier than the perineal operation. We cannot miss entering the bladder, and it is only in exceptional cases that the peritoneum extends very low down towards the symphysis pubes. For myself, I would much prefer this procedure, when the bladder is distended, as in cases of impermeable stricture, in the hands of an inexperienced surgeon, to the perineal section. The operation has gained great favor in the last four or five years, although its revival was at first regarded with a great deal of doubt. My first experience with it was in 1883, in the case of a man who had in the bladder a large shawl-pin, which could be felt above the pubes. I suggested to the physician that the operation above the pubes would be the best. It was done with perfect ease. After that I had a number of cases in which I entered the bladder in this way, and it seemed to me advisable to call attention to this operation again. Somewhat to my surprise, I found that several surgeons had already had a somewhat similar experience; and it seems likely that this method of entering the bladder may to a great extent supersede that by way of the perineum.

UNUNITED FRACTURE.

This young man has had a fracture of the humerus. The bone failed to unite, and there was considerable loss of substance, and you will see that the fractured arm is much shorter than the other. He came in here after several attempts to produce union, and I determined at first to cut off the ends of the bone and wire them together. When I came to lay them bare, however, the bone was so soft (this is often found to be the case in ununited fracture where there is loss of substance) that it would not hold the pegs or ligatures. I therefore simply drilled the bones and had the arm dressed, which I think will give a satisfactory result. I am told the arm is much firmer, and I find there is a considerable degree of consolidation about the fracture.

I will just call your attention to the line of invasion, which was at the back of the arm, because we could there lay bare both fragments without any very extensive incision, and we avoided all risks of injuring important nerves or blood vessels.

The methods of dealing with cases of ununited fracture are very varied, as you probably know, and the results obtained, unfortunately, are sometimes far from what we could wish. In this case, the youth of the patient and his vigorous health and the soundness of his tissues is favorable generally. I hope he will have a good and useful arm, by which he will be able to earn his living.

The loss of substance of the bones of the arm is a curious clinical fact that has never been explained, so far as I know. There are cases where the entire bone has been absorbed, from the shoulder to the elbow. I have seen another case in which six inches of the bone were lost. However, in that case, even had we succeeded in uniting the ends, it would have been useless, as there was anchylosis of the elbow. And that is another point in all ununited fractures, which in this case we were not able to attend to. Where you have charge of such a case from the first it is important to keep the elbow joint as free as possible, by constant passive motion, to prevent stiffening of the joint.

AMPUTATION OF ANTERIOR PORTION OF FOOT.

The next case is a boy, the anterior portion of whose foot I amputated last Saturday afternoon. It has not been touched since then, and we will see what its condition now is. This boy, who was in good health, had the front part of his foot run over and crushed by a railroad car; it was necessary to take off a larger portion of the foot than I would like to have done. In this case, as you will readily understand, the foot being a lever upon which the patient walks, the risk was that contraction of the tendo Achillis would draw up the short stump, and that when the boy walked, instead of treading on the heel, his weight would come on the stump, which would be tilted down. In order to prevent that, I divided the tendo Achillis and brought the heel down, so that the boy will walk fairly upon what is left of the sole of his foot. That is a very important point in all foot amputations.

I call your attention to this case because, within a very short time, a distinguished surgeon has made a statement which has been backed by others, that where the front part of the foot is damaged, the amputation should be made about five inches below the knee. I could not make such an amputation when I could give this boy a good heel to walk upon.

In this case we meet with what is almost always met with in amputations of the foot, and that is a great deal of hæmorrhage. I presume the time occupied in stopping the hæmorrhage was at least four times as long as that of operation or even of etherization.

On my taking off this dressing you see where the heel is now. It is not turned up at all, as it would have been if the tendo Achillis had not been divided. The operation having been done under strict antiseptic

precautions, the stump is in a perfectly healthy condition. In former times, after amputation of this kind, the wound was always dressed the next day; the day following we generally found some suppuration, and the third day there was generally free suppuration, which we thought a most excellent thing. The stump had to be squeezed, and required dressing every day, causing a great deal of pain for the patient and a great deal of trouble for the surgeon, which is now avoided.

In this case I left only the astragalus and os calcis. That is not the best operation when you can help it; it is better to leave more of the foot, for then the patient has more leverage for walking, but I think you will see that this is very likely to make a good stump. By having a stiff boot, with a sole that will give some spring, the boy will have a foot that will give him an almost natural gait.

What I want to lay special stress on in this case is that the natural heel is better than any artificial leg that can be made. Moreover, in spite of antiseptic precautions, the risk still remains that amputations are more dangerous the nearer they approach the body.

In this stump we used a cat-gut drain and there is no necessity for disturbing it, as the portion within the stump will be absorbed and give no trouble. The stump now needs only a re-application of the dressing. This will not be removed for ten days, unless there is some indication for disturbing it. Probably that will be the last dressing required. The stump has, in this case, been enveloped in sublimate gauze, and you will see that there is no irritation whatever of the skin. You will find that the sublimate gauze sometimes causes an irritation of the skin and occasionally a copious eczema. Such cases are, however, so rare that we generally use the sublimate gauze until we find that it produces irritation.

RANULA.

Briz, of the General Hospital, Madrid, mentions a case of one of these tumors, as large as a hen's egg, which he cured in a very simple way. The contents of the tumor were too thick to be aspirated with a hypodermic syringe, and fifteen minims of the following solution were injected twice, at an interval of three days, and effected a permanent cure:

℞ Potasii iodidi.....gr. vi.
Tinct. iodini,
Aquæ destil.....āā f ʒ i.
M.

—*La Andalucia Medica.*

A DAY'S EXPERIENCE IN ELECTRO-GYNÆCOLOGY.*

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Ladies and Gentlemen:—Before proceeding to the special subjects of this evening's lecture, I desire to say a few words on the attitude that should be maintained by the rational physician in studying the diseases of women. It is probable that no other body of scientific workers has displayed as much personal bias in approaching practical questions as has the medical profession. This is doubtless because its work consists in an analysis of the most complex question of all: man—the acme of creation, and hence the most difficult question to understand in all nature. Lacking complete knowledge of its work, its individual members become unduly impressed with those things they do know, and are ever ready to draw general conclusions from imperfect premises. And if man, as a whole, is so difficult of complete conception in his weaknesses and diseases, how much more so is woman, that gentler and more delicate half of man, with the added refinements of structure and function that characterize her sex? It could only have been this bias in the minds of investigators that could lead them to regard the diseases of women as merely mechanical and surgical. So dominant have become the few things that surgeons do know that all else is forgotten, and we are gravely assured on all hands that gynæcology is but a branch of general surgery. This designation of a part as the whole would concern us but little if it did not constitute the working creed of the most active practitioners of the day, who are, in the midst of much good work, rearing another of those tidal waves of excess that threaten in the inevitable recoil to sweep away their own well-founded work. What has womankind done that renders her pelvic ailments so different from the functional and organic derangements of other parts of the body?

True gynæcology is a broad consideration of the ailments peculiar to women, and thus deals not only with morbid growths and physical deficiencies, but also with an association of functions of so delicate a nature as to be comparable only with those within the cranium. By reason of the abundant sup-

* A lecture delivered at the Philadelphia Polyclinic and College for Graduates in Medicine.

ply of spinal and sympathetic nerves within the pelvis, and the overshadowing importance of nervous phenomena in its three great functions, menstruation, procreation, and gestation, gynæcology should rather be considered a department of neurology than of surgery. With this thought in view how unsatisfactory are our present text-books; and could not something be gained by re-examining our present views of the importance of mechanical deviations in derangements of these functions? Much is said of disorders of menstruation and gestation, it is true, but how little of disorders of the procreative function, imperfections in which, I believe, are at the bottom of a large proportion of the most annoying troubles for which we are consulted. We hear much of lack if virility—why not also of a lack of femininity?

To regulate, conserve and restore function should be our aim in gynæcology, rather than blind amputation of parts we think defective, and hence the physician with his remedial measures has the first right to the field. Neglect of this common-sense rule is daily adding to the host of unnecessary mutilations with which women have been afflicted of late, and has filled many an untimely grave. The careless way in which grave operations are suggested and performed was strikingly illustrated the other day in my service at the Dispensary for Women, where a patient applied for treatment for a pain in her side and slight menstrual irregularity. Examination revealed no apparent deviation from physical normality. She had been sick but six weeks, yet had been advised at another dispensary to have the appendages removed at once. Such an occurrence gives us an inkling of how that other dispensary furnishes a well-known operator with an unusual abundance of material.

But dispensary work gives us an imperfect view of the daily problems of gynæcology. It is the private patient that taxes our skill to the utmost, as it is well known that certain faults in the higher civilization of the day tell especially against the normal performance of function; hence a full illustration of the particular subject of this lecture—the value of electrical applications in regulating, conserving and restoring pelvic organs and functions—requires that both classes of work be represented. I shall therefore take you in fancy with me into office practice, as well as to clinics to illustrate the experiences of a day in electro-gynæcology.

MENORRHSPASM.

I wish you first to consider a case seen to-day at the Dispensary for Women. Imagine a well-proportioned, otherwise healthy married woman of 28, who complains only of a menstrual pain and intermenstrual tenderness. Since puberty she has suffered from an aggravated example of that periodical pain that is the bane of so many young girls and older women—a condition to which I gave the name of menorrhspasm, with its attendant menorrhalgia, some two years ago. Her former physician preferred to call it by the older name of dysmenorrhea, and the tenderness that is now found to the left of the apparently normal uterus is possibly due to the mechanical view of her condition implied in the use of such a term, for she has been dilated twice. Thus a purely surgical view of a neurotic condition induced the use of a method that she thinks left her worse than before.

Recognizing that the primary disease was but a periodical neuro-muscular spasm, to which had been added a moderate degree of chronic inflammation of the left appendages. she was treated by simple vaginal applications of the galvanic current, 40 ma. positive being applied on a cotton-carbon electrode in the left fornix twice a week. She has now passed three periods without pain, and tells us to-day that she was more comfortable at the last one than at any time before in her life. How did these applications accomplish such results? Doubtless by allaying neuro-muscular irritability; by stimulating metabolic activity in the tissues, enabling them to throw off morbid products and conditions; and by combating congestion by virtue of stimulation of vaso-motor nerves.

RELAXATION.

An interesting case seen to-day in office practice bears out the remarks made a minute ago on the importance of a perfect accomplishment of one of the more delicate functions of the pelvic organs. The lady, a multipara, applied to me some time ago for the relief of a backache, a bearing-down sensation, pains in both sciatic and crural regions, and moderate leucorrhœa. A local examination showed the vagina relaxed and overly congested and sagging. There was also a partial laceration of the perineum, which dated from an early confinement. By close questioning it was brought out that the marital duties were decidedly deficient in normal completeness, though by no means painful. Here was a condition not unlike those found in other organs when suffering from neuro-muscular atony, as, for instance, the stomach in nervous dyspepsia. As in such a stomach true hunger is as lacking as is the ability to

comfortably digest food, so here an attempt at functionation without that most potent sauce, hunger, results in an ever increasing enfeeblement and consequential engorgements and irritations. The fault was clearly not in the relaxed mucous membrane, but in the nerves and muscles behind it, and the result proved the surmise to be correct, for a practical cure was obtained some time ago by alternative applications of the galvanic current (vagino-abdominal) supplemented by two slight intra-uterine applications of the same kind. The latter were given by means of the inoffensive elastic spiral electrode, and were 20 milliamperes strong, and a week apart, giving quick relief from the annoying sensations in the back and limbs, which had no doubt been due to the uterine congestion.

Such quick results could not have been obtained in a more chronic case, particularly if the perineum had been badly torn or the muscular substance of the vagina atrophied; but no clinical fact is more patent to me than that the constrictors of the vagina may be made to contract by swelling applications of the galvanic current when not completely torn from their attachments, for I have repeatedly verified it. Faradic applications are also of service, but not nearly so valuable as the galvanic.

I have called this condition *relaxation* for want of a better term, but it is easily seen that this word refers only to a portion of the trouble. There is need for a scientific term for the condition as a whole. The antithesis of dyspepsia, it is by far more common and more productive of morbid consequences.

FIBROID TUMORS.

Within the past few days I have had the pleasure of seeing two former office patients who were under treatment for fibroid tumors of the uterus some time ago, and who kindly came in to report. The results in both have been excellent, and as they have not been reported before I wish to speak particularly of each. The first case was sent to me by a prominent gynæcologist and obstetrician of this city in May, 1890. The patient was 46 years old, unmarried, and had been suffering from hæmorrhages and pain for several years. The growth was larger than a child's head, occupying much of the pelvis and extending up into the abdomen to a point three inches below the umbilicus. Intra-uterine applications of from 30 to 100 ma. were begun and continued for a number of months, the applications being at times negative and at others positive. Prompt relief of pain and hemorrhage ensued, and the patient was shortly able to resume the active life that had long since been impossible; but I was discouraged by a lack of real decrease in size. To accomplish this additional result, if possible, I changed the treatment to intra-uterine alternative applications of 100 ma., that is: the current strength mentioned was turned on gradually with one pole, held a half minute, gradually turned off, and the same procedure repeated with the commutator reversed, applying each polarity about six times at each sitting, the sittings never being closer than a week. By this method chemical electrolysis and its attendant local action was reduced to a minimum, while a maximum galvanic constringent action was obtained, with its attendant effect on nutrition. The good effect of this change was soon manifest, the upper extremity of the tumor receding to four inches below the umbilicus in three weeks, and five inches in eight weeks. The treatment was discontinued by me shortly afterwards, and the patient was asked to return at intervals for examination, which, however, she was unable to do until nearly six months had elapsed. At that time (Sept., 1891) I was astonished to find that the tumor had continued to decrease in size without treatment, and was entirely within the pelvis. When seen to-day there was practically no tumor, the enlarged uterus being guyed to the pelvis in various directions by bands of adhesion that had formerly embraced the tumor itself. The symptomatic cure was equally perfect. The tumor in this case was of the smooth, hard variety.

In the other case the tumor was three-lobed, much larger, and filled the lower portion of the abdominal cavity up to a level with the umbilicus. In constitution it was doubtless more myomatous than fibromatous, as the characteristic menorrhspasm was prominent, she being compelled to remain in bed under the influence of morphia at each period. Under simple intra-uterine treatments of the usual kind, interspersed with vaginal applications, this enormous growth has become gradually absorbed, leaving a uterus that differs from others only by being still nodular, and so mobile as to become easily displaced.

UNIVERSITY ALUMNI DINNER.

The Alumni of all departments of the University of Pennsylvania propose to give a dinner on Saturday, February 27, 1892, at Musical Fund Hall. Eminent speakers among the Alumni are expected to be present. Any graduate of the University desiring to attend may send his check for the amount of subscription, ten dollars, prior to February 17, to John Douglass Brown, Jr., treasurer, 519 Drexel Building.

COMMUNICATIONS.

A FEW OBSERVATIONS ON DISEASES WHICH IMPLICATE THE HIP, KNEE AND ANKLE JOINTS DURING CHILDHOOD.*

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KNEE-JOINT DISEASES.

The knee-joint being wholly devoid of any muscular envelope laterally or anteriorly, morbid changes affecting its synovial sheath, cartilage, ligaments or bone are more easily recognizable than in an articulation more deeply lodged; and hence, a morbid action in this situation will not, as often here, escape detection in its early stages as in the hip joint. The epiphyseal cancellous heads of bones which form this articulation are very large and have vast articulating surfaces. The ligaments at the knee are more numerous and powerful than in any other articulation in the body. Its synovial capsule, practically divided into four pouches by the patella, is of considerable capacity, of great elasticity, and capable of immense distension. The condyles rest on and play over an extensive area of articulating surface. That formed by the tibial head is very resilient and elastic, thereby effectually guarding against sudden or violent concussive force. The fibro-serous investment of the knee-joint is a very thick, elastic membrane, which is highly vascular. The absorbent power of the synovial capsule is very great; hence, sanguineous, serous or purulent accumulations within it are often quickly disposed of.

Rheumatic and neuralgic affections are very common in the fibrous structure of the knee, the former in the acute and subacute varieties attacking one or both joints. Every one is acquainted with those vague, shooting pains through this joint in childhood during the stages of active growth. Congenital syphilis plays an important rôle in many affections of the knee in which the cellular elements of the medulla, bone and perichondrium are the seat of inflammatory changes.

As the knee-joint is powerfully acted on by muscles of great volume and strength, it follows that functional or organic changes, either within, or exterior to their sheaths, will more or less impede knee action. Their tendons, behind and anteriorly, contribute largely towards maintaining firmness in the joint; hence, are practically accessories to the ligaments.

The most common morbid processes in the knee-joint in childhood are of a rheumatic or tubercular origin. As the question of diagnosis will not be considered here, signs, symptoms, or clinical history will be referred to only when necessary.

Rheumatic inflammation is comparatively of infrequent occurrence in early childhood, and, when present, is not accompanied by a peculiar and characteristic cachexia as is strumous disease. Unlike tubercular invasion, the onset is sudden and is usually attended with a marked hyperexia. We are concerned here only with the non-arthritic, intermittent phase of it. When the fibrous elements of the muscle sheaths, the intermuscular septa and the thecæ of the tendons participate with severe, acute rheumatic arthritic inflammation, it may end in the complete destruction of function in a joint. When the knee or ankle is the seat of rheumatic inflammation, it is much easier of recognition than when the femoral articulation above, is thus involved. In rheumatic arthritis at the knee, synovial effusion is commonly large and promptly appears with the advent of the disease; to the hand, in the early stages of rheumatic inflammation, the integuments will feel dry and hot. It is seldom if ever, we encounter in the unmixed disease that enormous subcutaneous infiltration which gives to the skin the thinned, atrophied and smooth, blanched appearance so peculiar to tubercular arthritis or osteitis. Œdema of the ankle and foot are not commonly seen here; and, although there may be well pronounced joint implication, there is not that tendency to extreme flexion of the leg or the thigh which is seen in tubercular osteitis, arthritis or synovitis. When in doubt as to the presence of a rheumatic element in a given case, one would suppose that the flitting character of the malady and the implication of other joints would decide the question of diagnosis, but, sometimes rheumatism may spend its violence in one articulation. When the synovial effusion is not very great and is wholly serous, with its absorption and the subsidence of inflammation in the peri-arthritic structures, pain and soreness will disappear, and the use of the limb be quickly restored. But, sometimes, there is an abundant effusion of lymph, which is not only freely formed on the joint surface but is likewise elaborated along the muscle and tendon sheaths, which if not absorbed,

* Continued from the last issue of the Reporter.

may undergo organization. Within the joint this material firmly binds the articulating surfaces together, and in time taking on osseous changes will cause true bony anchylosis. Even when the joint may be quite free, yet a plastic effusion into the muscle sheaths and intermuscular spaces, undergoing fibrous changes, will, in varying degrees according to its site and in proportion to its quality and extent interfere with, or wholly destroy, knee-action.

This is of paramount importance to remember, for it reiterates the fact (though it may seem rather a paradox) that a joint may be immovably anchylosed and yet its anatomical structures remain perfectly healthy. The latter is designated muscular anchylosis, but it may be tendinous. When anchylosis or a mechanically fixed position of the limb is maintained in a youth for a considerable period of time, we will invariably have muscular, adipose and cellular atrophy, with retardation or temporary arrest of growth. Now, it will be noted that in order to relieve intra-articular pressure the patient has the leg flexed to a considerable degree. The tissues covering the capsule are œdematous and dropsical, and feel boggy and non-resistant. The synovial membrane is greatly thickened and distended. The patient has the general appearances of strumor. He is pale, emaciated and badly nourished. When the disease is limited to the synovial membrane, the effusion will be considerable. This may be purely serous, sero-purulent, a sort of a grumous mass of pea-soup consistency, or it may, through pathological changes, have acquired a gelatinous consistence. Besides, when not disintegrated and absorbed, in time its residue will ossify and serve as a cement in effecting bony anchylosis.

In some cases, there will be extensive inflammation in the arthritic structures, without an excessive synovitis. There, as in other joint diseases of a tubercular origin, the presence of pain or muscular spasm is not always a reliable criterion; for, in tubercular caries of the epiphyses its advance may be so insidious as to escape detection until extensive damage has been done.

When the osseous elements of the knee-joint are the seat of an extensive tubercular invasion, all the circumjacent and enveloping tissues in the vicinity of the capsule participate. A low grade of inflammation supervenes which has a marked tendency to run into ulceration, so that, in time, the cartilages give way in places and the perichondrial or periosteal investment into which the ligamentous structures are inserted, sharing in the necrotic processes, break down and permit a luxation of the femoral condyles, its extent and direction depending on the situation and function of the detached ligaments. The synovial membrane seldom completely escapes when the tubercular process is well established. Now, the changes here noted during the varying stages and phases of this painful disease, are of infinite importance to notice; because by an intelligent comprehension of them we may be the better able to interpret their significance and check their progress.

It is apparent that the knee-joint is a passive agent. That it is largely made up—except the osseous parts—of non-vascular structures, as the tendons, cartilages and ligaments,—hence, one would assume that microbic action would be rapid and destructive in a part so defective in vascularity. Nevertheless, the contrary is the fact, for nothing can be more vascular than the lung, yet within its parenchyma tubercle works its greatest havoc. On the contrary, as a general rule, degenerative changes within the capsule of the knee advance slowly, as do those of a regenerative character, after the disease has spent itself.

The synovial membrane is commonly the favorite seat of incipient, tubercular infection. Being a serous membrane, it is highly vascular and molecular changes in the interstices of the lymph follicles are rapid and marked. Invariably, when it is occupied by inflammatory changes, these are transmitted through it by the absorbents to the superjacent structures.

The effusion in tubercular synovial inflammation, primarily, is purely serous, may undergo various mutations: purulent, gelatinous, fungoid, caseous or calcareous, the various phases of disorganization being associated with certain well-known clinical peculiarities. The more common termination of synovial effusion is the absorption of the primary secretion, or final disintegration, fatty softening, liquefaction and ultimate absorption of the residue. When, after synovial effusion, purulent or puruloid changes set in by the pressure of the contained acrid, irritating quality of it, granular, surface changes begin in the serous layer of the capsules, which by hyperplasia and interstitial infiltration develop into large, irregular shaped fungosities, which may stuff up the synovial space after all liquid effusion has disappeared.

The bone lesions are the most serious of all in knee-joint diseases; for, with the entire escape of the osseous structures in this malady, a useful limb may yet be preserved and the case is not apt to pursue such a chronic course.

The marked disproportion between the joint and the limbs above and below is more apparent than real; for, with inaction, the limbs quickly waste, while the swelling at the seat of morbid change remains, the contrast becomes all the more striking.

White Swelling.—The genuine tubercular osteo-arthritis, or synovitis, is a disease of great chronicity and usually passes through many painful stages before its course is arrested. In children it is a self-limited disease and will usually, in time, undergo spontaneous arrest, provided the powers of life can resist it until its march has ceased. I believe it very rarely ends in the loss of life, and that those who have been the victims of tubercular osteo-arthritis in early life, after adult years are attained, are mostly hardy, vigorous and energetic.

In the knee as in the hip or other joints, we may meet with every phase of tubercular infection, and we may find one or many of the structural elements of the articulation singly or simultaneously attacked. The disease becomes serious in the knee-joint only when the cancellous ends of the bones become affected and the disease extends beyond the capsule, involving the periosteum. This is not a common event, as the microbes of this malady manifest most frequently a preference for the periosteum or the non-vascular structures, as the cartilage and ligaments.

In the primary stages of tubercular arthritis at the knee, beyond certain vague symptoms, we have little definite evidence of the precise organic changes within the capsule until synovitis is present, and the periarticular elements exhibit evidences of pathological changes.

ANKLE-JOINT DISEASES.

This articulation in many respects bears a striking anatomical resemblance to the knee. Its articulating surface is very superficial, and like that above, is powerfully supported by numerous tendons. Its ligamentous supports, though numerous, are subordinate to muscular action through the medium of their tendinous termini. This is well demonstrated in talipes. This joint not only supports one-half of the body in standing, but it also must bear the body's entire weight. Yet, notwithstanding the constant jars, concussion and strains which it must endure, it is less vulnerable to pathological processes than the two other articulations considered.

The malleoli which wall it in laterally being mainly composed of dense, compact tissue, are seldom seized upon by tubercular infection. Where we do find this pathological process invade this joint, it will usually occupy the synovial membrane, cancellous head of the astragalus and extend downward into other tarsal bones.

When a serious phase of strumous disease is lodged in this articulation, we will find the foot extended on the leg, with the integument and cellular membrane of the former swollen and œdematous. The pathological changes in this situation in bone, synovial membrane or cartilage are essentially the same as those located in other joints.

TREATMENT.

The treatment of diseases of the three principal articulations of the lower extremities may be divided into constitutional and local, tentative and radical; all being dealt with on essentially the same principles.

Constitutional remedies will be resorted to when the pathological changes appear to have arisen from certain specific morbid influences, as gout, rheumatism, syphilis, malaria, gonorrhœa, or neuralgia.

That arthritis may arise from morbid conditions of the economy no one can question; nor will anyone deny that when this cardinal fact is understood, relief may not only be promptly effected, but simple measures may be instituted with a view to prevention. A failure to recognize the frequent constitutional or specific ætiological factors often operating in joint maladies may terminate disastrously to the patient whose condition, in consequence of misdirected therapeutic efforts, has not only not been relieved, but perchance greatly aggravated; and a temporary, trivial, functional affection has been made the groundwork of a condition sure to end in leaving the patient a cripple. Accordingly, in all cases of joint diseases of an acute origin, particularly, we must first search for systemic influences, malaria, rheumatism, or hereditary syphilis. The clinical symptoms of each of these maladies are usually quite clear and distinct, though they may blend with each other or others in many particulars, but so vague and imperfectly defined as to render little aid in diagnosis. When, then, we have reasonable grounds for suspecting that inflammation in, over, above, or below the immediate arthritic area is of a systemic origin, the patient should be kept in bed or on a lounge in the house, at any rate, and internal remedies plied with care and persistence until we are quite certain of the true character of the local changes.

At the hip-joint, mistakes will be most often committed. In the congestive or inflammatory conditions occurring at the hip, of the group here defined, in association with

internal remedies, local applications will serve useful purposes.

There unquestionably is a large number of joint affections of an hysterical, cerebral, or pyschological origin. The subjects of this neurotic class are usually anæmic, badly nourished, and have frequent moody, morose spells. Hence, morbid, molecular changes within the skull, in the brain substance, it is fair to assume, may, by reflex irritation, make themselves manifest in some distant region of the body.

From the obscure character of many painful affections in certain groups of muscles acting on joints and often exclusively limited to an articulation itself, in which, although severe pain and an infirmity obtains, yet there is no constitutional disturbance, no local, perceptible, tangible, morbid changes at the root of the trouble, so that they are very probably of a cerebral origin. There are two fundamental essentials necessary in the successful management of this group. To begin with, the patient's full confidence must be secured, or all our efforts are futile. You must make an impression. Sometimes this impression may be mental, again physical. It may be pleasant or painful. Hence, some of those crippled have been limbered out by an injury, a fall, or a violent concussion of the body, by a great fright, by sudden emotional effects, as surprise or joy. Hypnotism, mesmerism, and other occult phenomena have been successively invoked in these cases with varying results. No hard and fast lines can be laid down for the management of those arthritic neuroses. The greatest difficulty often consists in recognizing their true character.

The treatment of tubercular diseases of the joints and their over-lying parts has, since the dawn of medical science, seriously occupied the minds of practitioners. Its clinical features have been profoundly studied and thoroughly comprehended for ages. It was well known to commonly develop in connection with a well marked, constitutional cachexia, to pursue a very chronic course, and, finally, cease spontaneously after passing through some of its many various stages. It was not known, however, that its pathological basis was identical with tubercular meningitis of infancy and childhood, and pulmonary tuberculosis in the adult; that the germ of one was common to all.

Many teachers who had heretofore loudly proclaimed the invariable, traumatic origin of joint diseases *have been* suddenly silenced by the advent of the new doctrine. Sanguine, indeed, were all that at last the mystery was solved; and henceforth the management of this class of cases, conducted on strictly scientific principles, must always lead to no other than prompt and permanent cures. So that, almost at once, the moderate conservatism of the past was replaced on an extensive scale by radical and sanguinary methods. Joints were ruthlessly opened, scraped or wholly swept away by the blade and saw. Time was taken by the forelock and a local, tubercular lesion in the articulation of the child was as effectually eradicated in as many weeks as it heretofore was in years. Time, which is a great leveller, has, however, demonstrated that there is not so much in the bacterial theory as was first hoped; that it has been an *ignis fatuus*, the flash of whose light may often be better ignored.

It was discovered that those microscopical mites may lie dormant in the tissues for years; that at their worst they have but a life limit, or may be, in morbid processes, more rapidly devoured by the phagocytes than they can multiply. Those larger incisions and extensive resections, too, have been followed by a fresh infection at the seat of the operation, and even when this is not the case, so much shortening or deformity may result as to have the patient many times much worse than if nothing at all were done for him. Besides, there is a large element of danger in their performance, and the melancholy end, of not a few, has been a consecutive amputation or death.

Accordingly, we are practically driven back to the old lines and hence, as a matter of stern truth, the cardinal features of the underlying principles as promulgated in the early part of the present century by the great masters of the surgical art, must constitute our chief guidance in the treatment of those maladies to-day.

There can be but little doubt that in many instances the tubercular foci are limited to the soft parts outside the capsule and primarily involve neither the head of the femur nor the cotyloid-cavity. In these situations the infections may undergo spontaneous subsidence or advance to suppuration and cease. It is only when we are assured by the history of the case and the physical signs present that the bony floor of the acetabulum or the articulating head of the femur is involved by tubercular osteitis or osteo-arthritis that we are quite certain of the presence of a malady whose course is usually tedious, painful and destructive.

Now, what shall the treatment be in cases of osseous tuberculosis? Should it be mechanical or constitutional, or both? In mild

cases bodily rest, or rest in bed, and means to combat local inflammatory processes should be employed. Unless there be great intra-articular pain relieved only by traction, then no sort of extension should be employed, as a few weeks or a month's rest in bed may in itself suffice. In very serious cases of tubercular osteo-arthritis, not only good judgment is necessary, but skill and experience. Here, a knotty question of treatment arises, for our patient has a chronic affliction, and the measures instituted for his relief should be directed, not only with a view of effecting temporary relief, but for the purpose of securing as much functional utility and as little deformity in the limb as possible.

A recent writer[1] in an able brochure, asks the pertinent question: "When shall we discontinue mechanical treatment, in cases of hip-joint diseases?"

I would modify it by inquiring; "When should we commence the employment of mechanical means, in hip-joint diseases?" Should we employ any sort of apparatus at the outset? Certainly not! My own experience leads me to believe that orthopædic appliances at the present time are too frequently and indiscriminately resorted to, and that by this abuse much harm is being done. The best that any sort of apparatus can do is to prevent motion of the joint. But the complete and prolonged arrest of motion in the articulation of a child means temporary cessation of growth of the limb. No sort of mechanical adjustment will effectually secure complete fixation of a limb without considerable pressure of the soft parts and of the main blood vessels. Hence, mechanical appliances should not always be resorted to in the early stage of disease at the hip, nor ever, except by those skilled in their use. Should they here be employed as a prophylactic measure? I believe that only in very exceptional cases do they serve as an effective preventive; and that where they have appeared to have served the purpose the disease was not of a serious character. Orthopædic appliances serve an invaluable purpose as a means to early locomotion in chronic cases, but if they are worn too long, or are improperly adjusted, the patient, without question, would recover with a much better limb if none whatever had been employed. The firm, smoothly applied spica bandage, serves a valuable purpose in the early stages of hip-disease. Free leeching, the actual cautery and vesicants, each serve a most useful purpose in given cases, both to relieve pain and moderate inflammation and by stimulating the absorbents. When the head of the bone or the annular rim of the cotyloid-cavity has been destroyed by necrosis and serves to perpetuate an exhaustive suppuration it must be freely removed; great care, however, being observed to preserve the periosteum and the muscular attachments. In superficial necrosis with no serious local or constitutional disturbances, we may safely rely on the economy in either wholly detaching or dispersing the residue by absorption.

The hip is often traumatized, particularly in boys, by blows, kicks, falls, or twists of the leg. I believe that a traumatism may be an active factor in causing *morbus coxarius* proper. But, it is probable that it is very rarely so; for there are very few country-bred boys who do not often injure their hips by falls, yet, with the most intractable of them, this disease is very rare. One must be guarded, nevertheless, in prognosis, and watch the case diligently, if of traumatic origin, before applying any sort of mechanical contrivance. Swelling, sensitiveness and distortion often rapidly follow a severe contusion, or sprains at the hip: and if their true character be not recognized early, it may be confounded with serious intra-articular trouble, and be treated on wrong principles. This is the class of cases, *par excellence*, in which immediate, permanent fixation by any sort of plastic material, or other mechanical contrivance may be followed by unfortunate results.

It is clear then, that while rest of the injured part is a fundamental essential, it should be of a temporary and intermittent description; in other words it must be physiological and not mechanical. Indeed, so serious are the consequences of protracted fixation to the ultimate functional utility and strength of the growing limb, that the cases demanding its employment must always be of a grave and threatening character.

For myself, in a general way, in these pathological conditions, traumatic or otherwise, I think the safest course to pursue, is to be content with keeping the patient quiet in bed in the beginning, and if in doubt await events.

This may seem a reprehensible course, for it may be claimed that valuable time is lost when mechanical treatment might alone have arrested the morbid action in its incipiency. But, in traumatism of the hip, not involving dislocation or fracture, everyone, I think, will admit that rest and simple remedies will suffice, while, if tubercular, interstitial infection is the trouble, a short delay in the adoption of orthopædic appliances can work no evil.

[1] Dr. N. M. Schaffer, *N. Y. Med. Jour.*, *Nov.* 13, '91.

The treatment of disease at the knee-joint is to be managed on essentially the same principles as that of the hip, but as this articulation has very large articular surfaces and is very superficial, radical measures have been, and are still resorted to, for the relief of its deformities and diseases. Heretofore, the practice most in vogue, was, to depend on local and constitutional remedies, mechanical appliances, and time. Results occurring from this line of treatment varied from partial or complete restoration of function, to anchylosis, or amputation. Latterly, however, acting on the assumption that tubercular foci in this situation may give rise by diffusion to constitutional infection, and, besides, taking advantage of the security against consecutive inflammation and suppuration which modern surgical methods offer, the synovial-membrane has been freely opened for divers purposes, and not infrequently the whole articulation swept away by resection. It has been amply demonstrated, however, that the invasion of vital organs is not necessarily seriously threatened by a local tubercular action. The incision of the capsule for the relief of great tension, moderate erosion and drainage, is, in my mind, a substantial improvement. However, they are but palliative measures which must be employed under pressing circumstances, and even then, only when every possible precaution has been taken against extraneous taint.

The great controversy has been on resection of the joint. Why carry a patient over months or years of suffering, and be content, perchance, with nothing better than anchylosis and deformity, when the malady may be cut short and the distortion obviated by radical surgical intervention?

On superficial examination this question would seem unanswerable, but when we submit the subject to the rigorous scrutiny we discover that the consequences following resection are often unsatisfactory, or worse; that it cannot be regarded as a cure of joint disease, for the simple reason that it leaves no joint to cure. And further, in growing children, that class in which it promised the best results, its application is most unfortunate on the growth and usefulness of the limb.

A resection of the knee-joint means practically its total destruction, *i. e.* the whole of the synovial membrane, the patella, the ligaments, the articular surfaces of the condyles, and head of the tibia are cut away in order that the sawn surfaces of the bones may be brought together and secured. Now what becomes of the immense hiatus remaining after the complete extirpation of all the cartilage, the ligaments, and osseous structures of the joint? Certainly a large gap remains. It is filled in with practically nothing if we exclude a thin layer of connective tissue and usually sufficient osseous substance to cement the divided ends of the bones together. There is, then, indispensably connected with resection, shortening, which proportionally increases with the rising and maturity of the body. But this is not all, the muscular fasciculi of all the hamstrings and those of the quadriceps extensors reduced for all time to a state of inaction, atrophy and degenerate, so that there follows a great diminution in the volume and strength of the thigh.

The substitute remaining for that once powerful, mobile joint is practically nothing but the glued-together ends of bone and an investment of integument.

An angular deformity, however, has perhaps been removed. True, but a perpetually straight lower limb is abnormal, as the leg is almost never long retained fully extended on the knee except in the standing attitude. Besides for purposes of utility and strength the flexed limb is by all odds much more serviceable than one anchylosed in the extended position.

When, nevertheless, there has been extensive destruction of the ends of the bones, the ligaments have given way, and the cartilages are broken down, the propriety of a resection then—if we may so designate the complete clearing away of necrotic structures—is an open question.

When these destructive changes have been consummated, one may hesitate between leaving the leg intact and favor fusion of what remains of the condyles and the head of the tibia, or an amputation. My own opinion is that the leg should be spared if possible, and the weakness at the seat of the knee-joint compensated for by a mechanical support.

During the past five years or more many European surgeons have been treating tubercular affections of the lower joints by intra-articular and interstitial injections of solutions of the various inorganic salts, hoping to secure by their action the destruction and absorption of the bacilli. Many cases have come under my observation recently, in which these injections have been employed. No doubt, when proper precautions are observed, this method in properly selected cases serves an important purpose, but we should be careful that in certain cases those pungent liquids do not light up an active and uncontrollable inflammation, and thus greatly aggravate a

case which was possibly making slow, but steady progress towards recovery.

At the ankle-joint tubercular infection is not of so frequent occurrence as in the hip and knee, though, when it does attack this articulation, its progress may be of an alarming rapidity. I have had a case under observation in which, from the first manifestation of osteo-arthritis at the ankle to the complete disorganization of the bony structures scarcely five weeks elapsed. The ankle-joint, like the knee, having no muscular investment is quite superficial for direct surgical treatment, but as with the former, orthopœdic appliances should always be resorted to in treatment rather than surgical intervention by sanguinary methods; for a solidly anchylosed ankle-joint may serve a most useful purpose throughout life, with little, if any impediment to locomotion, or apparent deformity. In this situation where the main tarsal supports have broken down by interstitial necrosis, and no active efforts at compensatory regeneration in their periosteal envelopes are evident, then an amputation is imperative; for without the astragalus and os calcis the remaining parts will be a source of misery and a useless appendage.

ANCHYLOSIS.

Moderate and complete, false or true anchylosis is one of the sequelæ which may result in varying degrees after injuries or diseases which involve the muscle bones and joints and restrict their free action. Our efforts should, in all cases in which this is feared, be first directed towards preventing permanent stiffness. This can best be accomplished by massage, early motion and bandage pressure.

Anchylosis is the *bête noir* of immobilization. How to preserve quiet in a diseased joint for a great length of time without seriously impairing or destroying its utility is a difficult problem. The mere fact that protracted fixation of an articulation induces no destructive, pathological changes in the joint itself, is no proof of its immunity, for in many of the most hopeless cases of anchylosis of the knee which have come under my observation, are those in which the sole difficulty was confined to the muscles, muscular sheaths, tendons and nerves, far away from the crippled hinge.

After traumatisms and moderate attacks of non-articular or muscular rheumatism, neuralgia or other vascular or neural affections, giving rise to pain and a tendency to keep the limb in a fixed position, an anchylosis may follow, which if its true, pathological character is not realized early, serious detriment may accrue to the functional use of the limb, or appliances may be adjusted which are rather responsible for the condition than the injury or malady itself. Hence, the vital importance in affections of every description which involve joints, whatever may be their nature, of instituting such exercise or motion as is compatible with physiological rest, with a view of preventing, (or if stiffness must result) of limiting its degree as far as possible.

Anchylosis is occasionally amenable to treatment according to its nature. For bony anchylosis, in which there is complete fusion and solid ossification of the articular surfaces, nothing can be done. Though, of late years, articulations have been resected with varying degrees of success. This, however, is not restoring motion in the joint, as the latter has been sacrificed. Muscular anchylosis, when fibrous changes have occurred in the fasciculi, and throughout the entire planes of the muscle and they are bound together, contracted and atrophied, is as irremediable and always more unfortunate than osseous. There is a species of limitation of action in a joint that might frequently be obviated altogether.

False anchylosis, so-called, is always more or less readily remediable. It frequently follows injuries and transient inflammation in or about the joints. If neglected, it may result in a permanent crippling of the limb. Judiciously applied force usually overcomes it, though here as in other species of anchylosis, one must proceed with great prudence in order to avoid injury to the nerves or blood vessels, or fracture of the bones. Frequently tenotomy or division subcutaneously of adventitious bands is a most valuable accessory in many cases.

Surgical history notes that singular class which moderns have designated phychological —those hypochondrical, hysterical, anæmic young women who have painful, tender joints which became so without any apparent cause. We find no evidence of organic change in the articulation. Medicines and topical applications have no effect and the crippled state remains. But a mental or physical impression is suddenly made, she throws aside her crutches and walks away cured. These are the cases in which the old-fashioned bone-setters would always have it that "the bone was out," and in which, by the abrupt and violent application of a twist and squeeze, torturing pain is for the moment inflicted; the patient recovered from the sudden shock, she was quite confounded to find

herself cured. With this class of joint maladies no anæsthetic should be employed. The practitioner, after having carefully examined his case, must speak with a confident assurance. When he takes the limb in hand, he will find that there is commonly a certain group of muscles hyperæsthetic, which, on any movement of the joint, gives rise to great pain. A firm, sudden and compound motion must be made, when we will usually feel adhesions give way under the hand as force is applied. I never put on any sort of dressing after the manipulation, but simply tell them that the more they exercise the joint the more thorough and permanent will be the cure.

Much might be said of the pathological changes which are mainly confined to the neighboring bursæ, the tendon insertion, the thecal envelopes, the medullary spaces and periosteal tissues, adjacent to and essential constituents of the articulations; but the object herein undertaken has been to call attention to and re-awaken interest in the study of the articular affections in the lower extremity so common in early childhood without any attempt at an analytical *résumé* of the latest notions of microscopical pathologists with regard to their minute elements.

CONCLUSIONS.

It may be said then in a general way that the maladies at the hip, knee and ankle joints in early childhood are functional and organic, intra- and extra-articular; that tubercular affections of the synovial membrane, the arthritic elements and the heads of the bone though sometimes tedious in their progress are self-limited. In their milder forms requiring little, if any, mechanical fixation of the affected joint. The premature adaptation of any sort of orthopædic appliance may result in serious ultimate consequences to the utility and strength of a limb; for enervation atrophy, contracture and fatty degeneration of muscle, always follow the long-continued, forced inaction, and absolute arrest of motion in an articulation.

Mechanical apparatuses when applied at the right time, judiciously selected and skillfully adjusted, are of infinite value; but when these conditions are not faithfully complied with, then the patient's chances are much better without them.

There is yet good ground for very strong and emphatic objection against resection of the knee-joint; for the total mechanical destruction of a joint is not a cure in any sense; hence, it can be justified only when disease has so far disorganized the osseous and osteochondral structures that amputation becomes necessary, as an anchylosed knee-joint is a hundred-fold more serviceable through life than no joint at all.

Caution must be always observed that functional is not confounded with organic or extra-articular joint diseases, as early fixation employed extension of a given limb arrests its growth. Besides, with moderate articular motion and muscular movement, full restoration will be much more rapidly attained than by any sort of mechanical therapy.

In recent extra-articular anchylosis, in order to derive the most prompt and permanent benefit from the liberation of the adhesions, the force should be cautiously but suddenly applied *without* an anæsthetic.

The term "hip-joint disease" should be rejected from surgical nomenclature as a term too vague and misleading. Maladies at the hip should have a classification based on precise and distinct pathological changes. By abiding this antiquated term there can be no doubt that not infrequently for a trivial inflammatory state of the soft parts, measures have at times been instituted intended for dealing with the more serious intra-articular disease.

Finally, in each and all of those pathological conditions at the hip, whatever be their extent, we should not lose sight of the cardinal fact that they all arise either from unsanitary surroundings, improper dieting, inheritance or malnutrition; hence, the root of these maladies must be reached by hygienic changes, proper food, freedom and the open air, and such medicines as will best combat inherited tendencies and favor the assimilation of a nutritous diet.

It will be noted here, that in the category of remedies for joint lesions nothing more than an indirect reference has been made to antiseptics. Antiseptics, except for purposes of purification of a sore or a wound in a joint, though they promised much, have been disappointing and serve scarcely any purpose in the treatment of affections here considered. —(For discussion see Society Reports, p. 341).

CARDIAC DROPSY.

Dr. Furbringer (*Il Raccoglitore Medico*, No. 15, 1891) uses the following:

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Lufus. folior. digitalis (2 p.)	....grammes	150.
Caffein. citrat	"	2.
Tinct. strophanth	"	5.
Liquor potass. accetat	"	60.
Succ. glycorrhizæ	"	5.

Sufficient for two days.

It may be pushed until the diuresis rises to 5 quarts a day.

THE TREATMENT OF DIARRHŒA IN CHILDREN.*

By DR. FLORAND,
PARIS, FRANCE.

It is not my intention to discuss the arduous and difficult question of infantile diarrhœa, nor do I propose to give any classification. I simply wish to consider the treatment of the disease *apropos* of five cases which I have observed recently. I will call attention to the treatment which seems to me the most proper to employ in certain cases of diarrhœa in children. One of the observations was a case of choleriform enteritis; the remaining four may be classed among the true diarrhœas, or better perhaps among the infectious gastro-enteritis occurring during the weaning period. Two of these cases I studied with Dr. Hutinel, to whom I first showed the especial method of treatment which I am about to relate. The other three were purely personal observations.

This treatment, first put into practice in Germany and communicated to us by Professor Grancher, has been used recently by Hutinel, by Dr. Sevestre at L'Hopital Trousseau and by me at L'Hopital des Enfants. We shall see what the results have been at the hospital, and study the reasons why such results have differed from those seen in private practice.

Case I.—X——, 15 months old; nourished at the breast; was weaned at the eleventh month, and afterwards fed, for about fifteen days, on milk, farinaceous articles, eggs and vegetable soup. The appearance of eight teeth was attended with no trouble whatever. On the 27th of September the child was attacked with diarrhœa, which the mother attributed to the cutting of the two upper molars.

I saw the child for the first time on the 2d of October. The diarrhœa was exceedingly marked; the stools were abundant, fetid, a little glairy, of a slight greenish color and of a decided grumous appearance. I advised the exclusive use of milk, and the employment of a mixture composed of salicylate of bismuth, lactic acid and paregoric. I again saw the child on the midnight of the 3d of November with Dr. Marcy. The little patient had had since the day previous twelve or fifteen stools, accompanied with vomiting. The passages were exceedingly fetid, and consisted of undigested milk and a large amount of liquid.

The child continued to suffer at intervals; his mouth was a little dry, and the rectal temperature 39° C. Enema with laudanum diminished neither the diarrhœa nor the pain, until a mixture of bismuth was ordered.

The child was placed on a limited diet on the 4th of October. On the 5th vomiting ceased, but the diarrhœa and the swelling of the abdomen continued. The little patient was restless, excited and peevish.

On the 6th there was a slight amelioration and the child was given some teaspoonfuls of broth. By evening the diarrhœa, the swelling of the abdomen, the pains and the general excitement returned.

On the 7th a consultation was held with Dr. Hutinel. The temperature of the patient was 39.5° C., pulse 130. The abdomen was much swollen; the tongue very dry, and the thirst intense. The child had had five stools of a dark, greenish color and fetid, and had not urinated. The skin was dry, and the child was so emaciated and weak that he could hardly support his own head. He constantly gave evidences of pain, which was pronounced at the moment of going to stool. All the other organs were apparently intact. Dr. Hutinel advised an absolute liquid diet (albuminous water and iced grog), a bath at 34° C., four centigrammes of calomel to be administered in the course of four hours, and washing out of the stomach if the symptoms persisted.

The night being passed by the patient in a restless manner, and the tympanic condition of the abdomen continuing, two glasses of hot water were ingested into the stomach. On the morning of the 8th of October this procedure was repeated with the aid of a gum sound, No. 13, provided with a funnel. After the operation, which was performed without the least difficulty, the child rejected a flocculent, slightly brownish and grumous liquid. After the washing, calomel was administered in the same doses as on the previous day. For the first time in six days the child slept that afternoon for seven consecutive hours.

In the evening the patient was less restless, but complained a great deal. A second washing was instituted on the next morning and this was followed by a calm sleep of six hours.

On the previous day, after the washing of the stomach as described, the child had only two greenish stools, but these were thick. The patient also suffered evidently from bad dreams. On the 9th of November the bowels were moved in the evening by means of an enema.

On the tenth the child appeared exceedingly calm, had passed a good night, his tongue was less dry, his belly less swollen and less painful, his skin moist, and had urinated abundantly. His stools were greenish and but slightly fetid. The child was given three drops of hydrochloric acid in sixty grammes of grog. On the following days the bowels had to be moved by means of enemata.

From the eleventh day alimentation was administered with great caution; 250 grammes of ass's milk in twenty-four hours was well tolerated, after four days of an absolute liquid diet. From the 14th the child was nourished with sterilized milk. Without any other untoward symptoms our little patient recovered with extreme rapidity.

Case II.—Andre X., 22 months old; nourished primarily at the breast. After the age of nine months he was given milk, and after the twelfth month, eggs, bread and vegetable soups added to the milk. The child had sixteen teeth and suffered relapses of sickness dependent upon the period of lactation, and afterwards from slight troubles of digestion, fetid diarrhœa and vomiting, all of which symptoms yielded rapidly to a light diet and a light purgative.

* From *La Medicine Moderne.*

These symptoms again appeared after eight days with such tenacity that they resisted all treatment, notwithstanding the observance of a strict diet. The child grew thin and weak; his thirst became pronounced and his tongue somewhat dry.

I decided on the 13th of November to wash out the stomach, which I did with Vichy water, following this by the administration of five centigrammes of calomel in doses of centigramme every hour.

The liquid diet was maintained until the 15th. The vomiting and the fetid diarrhœa ceased on the 14th. The alimentation, consisting of broth, and afterwards of soup, was resumed.

On the 22d of November, the child was placed on his old habitual diet. The troubles of digestion did not reappear and the child made a rapid recovery.

Case III.—John ——, aged 9 months; was from birth nourished by a mixed diet consisting of the mother's milk and carefully boiled cow's milk. On the 17th of October, he was attacked with symptoms of a choleriform enteritis; vomiting and abundant diarrhœa, which were increased with the ingestion of food. The stools were fetid and made up chiefly of undigested milk and a flocculent, clear liquid.

The urine was scanty, almost wanting. The child manifested a worn-out appearance, was greatly emaciated, notwithstanding that the diarrhœa had been only of a forty-eight hours' duration. The eyes were sunken and there was a pinched expression of the face. His extremities were cold, and his rectal temperature was only 38.8° C.

I ordered all alimentation to be stopped, and I then gave three centigrammes of calomel and grog.

The symptoms persisted. I then, on the 18th, washed out the stomach with hot water, using a No. 8 sound, and readministered the calomel.

Vomiting ceased, and from sixteen and twelve daily stools which the child had on the two previous days, the number was reduced to four. The little patient passed a bad night; so I again washed out the stomach on the following morning.

The exclusive alimentation with the mother's milk was cautiously resumed on the same day, and five days afterwards the child was placed on the old mixed diet, substituting the boiled with sterilized milk. No bad symptoms returned.

Case IV.—Jeanette X——, 6 weeks old; weighed at birth, 3700 kilos; was subsequently afflicted with imperfect nourishment. Her digestion was bad and laborious. She rejected the milk soon after she was taken from the breast; yawned frequently, and would cry without apparent cause. She had alternations of increase and diminution of bodily weight, and on the 6th of December, that is six weeks after birth, she had only gained 400 grammes. Her third nurse seemed to be in the best condition as to health, yet the child began to have every day from five to six stools of a greenish color, or turning green soon after their expulsion. They consisted chiefly of undigested milk.

The symptoms were somewhat ameliorated by the use of lime water, by Vichy water and by lactic acid; but as the child did not gain much in weight, and as the stools became frequent, sometimes of a green color, and causing by their presence an erythematous eruption about the buttocks, I advised the parents to let me wash out the stomach of the child. The operation was executed with comparative ease, and through a No. 8 sound I introduced a half-glassful of hot water.

The procedure was followed by the administration of two centigrammes of calomel in three doses.

The alimentation was continued with no other modification than a slightly prolonged interval between the sucklings.

After this operation the stools became regular (two a day). They were but slightly liquid and the greenish coloration of them was only seen two or three times and only once during the day.

Case V.—Louise F——, 30 months old; was nourished at the breast by not a very good nurse. Her digestion has been imperfect, and during the suckling period she suffered from attacks of diarrhœa. Her alimentation has been attended to with a good deal of care by her own father, who is himself a physician and a keen observer. For a long time the child has been placed upon a diet of boiled milk, to which were added a little soup, lactated flour and eggs. On the appearance of every period of dentition, she was troubled with marked troubles of digestion. The appetite at present is capricious, and alimentation sometimes is by no means an easy task.

On the 2d of November, on the rupture of the small molar teeth, the child exhibited a marked loss of appetite, followed by a fetid diarrhœa; and on the 8th of the same month, the diarrhœa was accompanied with vomiting, likewise fetid. The child had meteorism, the abdomen being slightly painful on pressure. She was much depressed, notwithstanding that there was a slight rise of temperature. Her extremities were cold, and after a few days she became much emaciated.

The fetid vomiting and diarrhœa continued during the 9th and 10th. The abdomen was somewhat swollen. The general condition was worse. Dr. Hutinel saw the child on the evening of the 10th, and advised a washing out of the stomach, to be followed by the ingestion of three centigrammes of calomel and a liquid diet (albuminous water and grog).

I practiced the stomach washing the same evening. It gave rise to the rejection of a large quantity of extremely fetid matters (milk and lactated flour), and I found it necessary to repeat the operation several times in order to completely clean out the stomach. During the procedure the child had also a fetid stool. There was a condition of amelioration during that evening and on the day of the 11th, when the child ceased to vomit and her abdomen became less tympanitic. On the night of the 12th, the little patient became worse again and was restless and peevish. She asked frequently for drink. Her abdomen became swollen and somewhat painful.

On the morning of the 12th, I gave my little patient a new dose of calomel. She had three green stools, somewhat glairy and still fetid. One of these had some bloody shreds. On the advice of Dr. Hutinel, I practiced during the day a second washing out of the stomach. The water ejected was slightly foul, somewhat flocculent and contained some brownish shreds. Part of the hot water remained in the stomach. On the 13th, the child appeared better, did not vomit and had no stools. She was given a few mouthfuls of broth. In the evening the meteoric condition of the stomach returned and the child became restless. I again administered two centigrammes of calomel, and the child was once more placed on absolute liquid diet.

It was afterwards necessary to produce movements of the bowels by means of enemata. Alimen-

tation was resumed with extreme caution, administering small quantities of raw meat well chopped up and afterwards broth and sterilized milk.

In about eight or ten days the patient resumed her old diet. The child, during the first days of convalescence, exhibited a voracious appetite. This intense hunger soon ceased and was replaced by an appetite less pronounced, but better than had been manifested by the child since her weaning. It was, indeed, sufficient to rapidly restore the lost energies, and principally the considerable weakness produced by this sort of infectious gastro-enteritis difficult to classify.

These five observations present such a peculiar interest that they need some consideration. Every child attacked by diarrhœa during the weaning period, due to a faulty nutrition, the diarrhœa being accompanied or not by vomiting, should have the benefit of stomach-washing and be subjected, at the same time, to the internal use of calomel and a diet of albuminous water and grog. The washing out of the stomach may be practised twice or oftener, according to the case, with hot water or Vichy water. The intestines should also be cleansed out by means of enemata of hot water slightly borated, especially if the evacuations are insufficient. The child must be kept in warm media, the feet well wrapped up and the abdomen well padded. If the temperature is elevated a warm mustard bath, at 32° C., is useful. If there is pronounced tympanites a poultice should be ordered to be carried over the abdomen.

The tympanites, the pains, the vomiting and the diarrhœa, whether they co-exist or one or the other phenomenon should come on separately, are all indications for the employment of the stomach-washings, the internal administration of calomel, and the subjection of the patient to the diet indicated.

After the disappearance of the symptoms, alimentation should be resumed with the greatest care. This should consist either of ass's milk, broth deprived of all fat, and small quantities of sterilized milk. If these measures should fail, the ingestion of raw meat, according to the method of Trousseau, should be resorted to. If at the beginning of such alimentation there should appear green stools, a little lactic acid, or from four to five drops of hydrochloric acid, should be administered, The washing out of the stomach in children is easily practised. The younger the patient the more simple the operation. After placing a cork between the teeth or the gums of the child, as the case may be, a caoutchouc urethral sound, of a calibre proportionate to the age of the patient, and to which a funnel should be attached, is to be introduced into the stomach, the whole apparatus acting upon the principle of a syphon. The introduction of the sound generally presents no great difficulties, the operation being performed in the course of a few seconds. The sound being introduced, two glassfuls of hot water are to be ingested, this being soon followed by the expulsion of the stomachic contents. If the matters ejected have a foul odor, the operation is to be repeated twice or thrice; immediately after, the first dose of calomel, 1 to 2 centigrammes, is to be administered, which is followed by a second and a third dose, at intervals of one hour. Generally a single washing out is sufficient; two or three are sometimes necessary. Albuminous water and grog are to be given in tea-spoonfuls every 5 to 20 minutes, according to the degree of the thirst and to the dryness of the mouth.

Most commonly, good results are immediate. The child soon after passes into a quiet sleep, the bodily temperature is lowered and the vomiting ceases. The evacuations, at first fetid, lose their bad odor and may even be suppressed. All the local and general phenomena are lessened or disappear entirely. The abdomen becomes less tympanitic and less painful. The restlessness and prostration are changed into a quiet condition of the system, and the reparation of the vital forces ensues through the effects of a refreshing sleep. The child begins to urinate.

The diet *per se* works wonders, and the little patient tolerates it for many days, provided it is composed of albuminous water and grog.

I may say that I have given, at the beginning of the disease, mixtures containing bismuth, paregoric and laudanum, which have sometimes attenuated the malady, but such medicaments have only acted as palliatives and were never sufficient to save the life of the little patient. It is unnecessary to recall the fact that diarrhœa in children has frequently a fatal termination. To be convinced of this it is sufficient to examine statistics of the terrible malady.

If the disease presents in hospital practice a greater mortality, this is evidently due to the fact that children are generally brought to the hospital in a weakened condition and are then subjected to a continuous re-infection. Besides, it is difficult to follow rigorously and carefully the treatment referred to. On the contrary, in children isolated and well taken care of in civil practice, the employment of this method of treatment is advantageous, as the results show in the cases reported, which cannot be considered as mere happy coincidents.

All these cases presented the most serious phenomena, and one of them was treated ac-

cording to other known therapeutic measures but without the least success. I hope, therefore, that new observations will permit me to study more fully the most precise indications for the treatment advocated, and to be able to give the reasons for the success obtained. Certain it is, that washing out the stomach removes from the organ all the toxic products which are contained in it and which are being constantly elaborated and absorbed in the intestines.

Calomel finishes the task, so to speak, begun by the stomach-washings, the action of that drug being antiseptic and purgative. It purifies and releases the intestines of irritating materials. Thus, by means of stomach-washings and the administration of calomel, a cleaned-out condition of the whole digestive tract, from the mouth to the anus, is brought about.

SCALDS AND BURNS.

By A. D. BINKERD, M. D.,
WEST MONTEREY, CLARION CO., PA.

"A burn is the most dangerous of all wounds," says the elder Gross.

Methinks I can still hear his finely modulated voice as he uttered this truism, and in my mind's eye still see his commanding figure and dignified manner while delivering his matchless didactic lectures in his palmy days, a quarter of a century ago, in the Old Jefferson. Like Abraham Lincoln, Dr. Gross, dead, still lives to challenge our respect, a worthy exemplar.

A burn may indeed be a most dangerous wound. Often has this fact been most sadly demonstrated. Whether a scald or a dry burn, the result may be equally dangerous. If one-fourth or one-third of the surface of the body be severely burned, we should make our prognosis with great caution. A mere hyperæmia of the skin extending over a considerable portion of the body, especially over the chest, may, and often does, result fatally within a few hours. When a severe chill convulses the form of your patient, be on your guard. It means mischief. I have seen acute pneumonitis destroy the life of a patient who had been apparently but slightly, and not at all dangerously, burned, death resulting within thirty-six hours. I have seen young men, in the prime and vigor of early manhood, walk unaided away from a wreck, talking hopefully of recovery from the effect of a steam bath or the hot water that had fallen upon them, become chill and cold in death within six hours. Truly, a burn is the most dangerous of all wounds.

A burn is also the most painful of all wounds. The skin is everywhere abundantly supplied with nerves; these coming in contact with a body having a temperature of 150° F. and upward, or 32° or less, assume an excessive irritation. The continuity of the skin being destroyed by a degree of heat much greater or much less than that to which the part has been long accustomed (for there is little difference between the effect of a burn and that of frost-bite) the nerves are despoiled of their integument, exposed to the air, disturbed in their functions, producing painful irritability. A small burn of sufficient intensity to produce vesication is often quite as painful as a deeper burn involving a considerable extent of surface. The resulting shock is probably much greater as a result of the greater burn.

The tendency to "run," and unwillingness to heal, have characterized a burn in all ages. The life of the patient has been not infrequently sacrificed by the constant drain upon the constitution resulting from death of the parts.

Pain and protracted suppuration are not the only evils arising from a burn. Danger to the usefulness of the parts after recovery, and unsightly cicatrices stand out boldly as important sequelæ to be avoided at all hazards or modified to the utmost degree. To accomplish this object is to be successful in the treatment of a burn.

A burn differs from an incised, contused, lacerated or punctured wound, being capable of imparting to the nervous system a more profound shock, which in some way modifies the career of the traumatism. Who does not remember the unsightly and unscientific pinning down of the chin upon the sternum, as the result of a severe burn involving these parts? With honest pride we can now state these things need not occur. The experience of twenty-five years has, over and over again, verified the statement.

It has fallen to the lot of the writer to meet a very large number of burns in the oil regions of Western Pennsylvania, from the close of the war down to the present time. These cases include every possible degree of severity—from the instantly fatal down through the long line of possible and probable recoveries. They include all ages and both sexes from the octogenarian to the babbling infant. I have seen the whole family annihilated—father, mother, and children, amid indescribable agony, but of very short duration. Everywhere and under all conditions

I have observed the effects of a burn to be the same. The treatment of burns now claims our attention.

We set out with the belief that a burn is a stubborn traumatism to deal with. In this particular we will probably not be disappointed. Having surveyed the extent and depth of the traumatism, and carefully marked the profundity of the shock upon the nervous system, observed closely the number and character of respirations and pulsations per minute, the presence or absence of thirst, also the tendency to chilliness (of the utmost pathognomonic value), you may now venture upon a prognosis. Here you will encounter the most vexatious disappointments. Suppose the burn is recent and of the extent of the palm of one or two hands, one-half the surface is in a state of hyperæmia, and from the other half the skin has come away in shreds with the garment. The wound is exceedingly painful. The patient can neither stand nor sit long enough to have any dressing applied. If the patient be an adult administer at once:

Morphia sulph.....grammes 0.033

Dress the wound with:

Glycerine..... .....cc. 30
Acid carbolic, fld. .....cc. 3

Incorporate thoroughly.

Saturate portions of cotton batting; cover the wound entirely; also finish the dressing with a roller bandage, neatly applied, but not too tightly. Make ample allowance for possible swelling. Above all be neat and clean in handling a suppurating surface. Your patient will now quiet down and show a disposition to sleep. See that he is kept quiet and let him sleep. Towards morning he will complain of acute pain of the burned surface. Decomposition of lymph has set in, the presence of matter is painful. Remove and burn all the dressing. With a basin of clean warm water and a fine brush remove every particle of lymph. Dry the surface of the wound by firmly applying bits of clean old, worn, cotton garments. Blood pours out here and there, and an angry, rebellious condition obtains all over the wound. Incorporate one grain of morphia sulph. with 2 or 3 cc. of tannic acid, and sprinkle over the surface. Then dress again with the glycerine lotion, and finish with the roller bandage as before. And let remain 8 to 10 hours before dressing again. Water may be given freely. Copious drinking followed by vomiting till death closes the scene, which I have sometimes witnessed, is only another evidence of the fatality of the burn. This is rarely seen after the first day.

We have now entered on the third day. The pulse is small and wiry, secretion from the kidneys scant and high colored. Appetite *nil*, tongue furred, and a bad taste in the mouth. We remove the dressing, a stream of offensive smelling lymph streaked with blood flows down and drops off the elbow. You need not ask the patient how he feels. You need but look at him to know that he feels sore in person and irritable in temper. How should he be otherwise with all the secretory organs in a state of torpidity? Woe to the luckless doctor who will venture an untimely joke at seasons like these. But happy the man who like the elder Gross or the elder Flint will enter into the sympathies of the sufferer while endeavoring to relieve the agony of both body and mind and thus challenge both his respect and admiration. The bowels are now thoroughly evacuated by a few doses of sal Epsom, the secretions reestablished, the appetite is reasserting itself. The character of the wound has changed, the transudation is less profuse and more consistent. Granules are springing up and struggling for continued life, many to be washed away by the excess of lymph, a few to survive.

The glycerine lotion has served its purpose. It is no longer applicable. The character of the wound has changed; this necessitates a change of dressing, one that is both soothing and astringent. What shall it be?

The following most unhesitatingly:

℞

Cera flava.....cc. 60.
Ol. olivæ.....cc. 600.
Acid. tannic.....cc. 30.
Acid. carbolic.....cc. 5.
Bismuth subnitr.....cc. 10.

Melt and strain the wax, keep it hot in one vessel while you heat the oil in another, when both are equally hot, (90° C.), pour together and stir, let cool gradually and stir continuously to insure uniform consistency. When of the consistency of apple-butter, add the tannic acid, then the bismuth, and finally, the carbolic acid. Continue the stirring process till the whole is cold. This, when properly made is a plastic substance which may be taken up with the spatula or with the fingers. It makes a sightly dressing and is not sticky, but is easily applied and easily removed. None of that nauseating and offensive smell, so common in the days of lime water and oil, can be detected where this unguent properly prepared has once been used.

How to apply a dressing to a burn is not known by everybody, even when you have the most potent remedy for good. Mother-wit and plain common-sense must be largely

relied on here, as in reducing a fracture or subluxation.

It is now the evening of the third day, though the character of the wound is somewhat changed, the effusions of sanious lymph is profuse, and in its state of partial decomposition is vile-smelling and painful.

How to proceed to dress is the next question. Do not lock up the secretions again by giving an opiate.

With a basin of tepid water, a fine camel's hair brush and a piece of fine old Castile soap, I remove all matter of every character. Remove all shreds of skin carefully with dressing forceps and scissors. Cleanse away every nidus or lodgment for the ever vigilant microbe. Dry the entire surface with patent lint, then sprinkle the part thoroughly with tannic acid and bismuth sub nitrate, equal parts. Cut your patent lint into strips one inch wide and of lengths to suit, 2, 3 or 4 inches, rarely more. With your clean spatula, or limber table knife, cover evenly one of the bits of lint to the required thickness, rarely to exceed two millimetres. Hold to the fire till the dressing is soft and warm, then apply gently but firmly to the raw surface of the wound. This imparts an agreeable, soothing warmth to the part. Continue rapidly applying one strip after another till the whole is covered—not only the denuded parts, but also all the hyperæmic portion. Then apply gently, neatly, and not too firmly, a narrow roller bandage, with the reverse turn to adapt it uniformly to any irregularity of the part. To the art of bandaging neatly the surgeon is largely indebted for his success. And so will you be in the successful treatment of these wounds.

Though the patient may be feverish, restless and irritable, it has often seemed to me that some soothing influence crept over him while I was at work—long before I had finished the dressing, the patient was locked in profound sleep, equally ignorant as to when I finished the dressing or when I left the house. This has happened to me so often, and with such uniformly good results, that I can safely and cheerfully recommend my method with the means described as *the* treatment for a burn.

The critic may say, "There are opiates in your dressing." I beg his pardon. Not a grain. After the first hour or two opiates are not applicable, or rarely so.

On the fourth day I find my patient refreshed and cheerful. I remove the dressing and find the character of the traumatism still farther changed. The angry appearance of the day before has subsided. The discharge is less profuse and of thicker consistency, "laudable pus"—as the elder Gross was wont to say—bathed the parts, beneath which healthy granules were springing up everywhere. I cleanse the wound thoroughly, as before, and dress in the same manner and with the same material with the same result. A few weeks will suffice for the treatment of a very severe burn, while as many months under the old methods would leave the patient disfigured and probably disabled for life.

In conclusion: 1. I insist upon the observance of the utmost cleanliness, twice a day if necessary. Remove all shreds of skin and all lymph.

2. I insist on cutting the lint on which the ointment is spread into small bits to insure perfect adaptation of the dressing to the inequality of the surface.

3. Observe and enforce the strictest rules of hygiene. Give the patient plenty of good, wholesome and nutritious food, of which milk should constitute a large part.

The above is the sum and substance of a quarter of a century of practical experience.

A CASE OF OVARIAN CYSTOMA.

By ARCH DIXON, M, D.
HENDERSON, KY.

Mrs. G., aged twenty-nine, married, mother of four children, youngest child two years of age, had not felt well since her last delivery, which was long and tedious. One year ago she noticed an enlargement, low down on the right side, about the size of an orange. Was not examined by any physician at that time. Enlargement grew rapidly, causing much pain and discomfort. On June 10th, I was requested by her brother, Dr. Thos. Bethel, of Pooletown, Webster County, Ky., to do abdominal section, and if possible remove the growth, the character of which he had not determined. On June 14, saw the patient for the first time at Robards, Kentucky. Diagnosis, ovarian cystoma. She was anxious for an operation. Assisted by Drs. John Young Brown and Arch Dixon, Jr., I proceeded at once to open the abdomen. A large quantity of ascitic fluid surrounded the cyst, which was very large and attached by adhesions from pedicle to base on the left side. The adhesions were tough and strong. A previous tapping doubtlessly assisted in bringing this about. With as much caution as I could bring to bear the adhesions were broken up, bleeding points caught and ligated

with sterilized silk. At the extreme upper left side of the tumor a large piece of omentum had to be tied off and cut away. The pedicle, which was inserted close up to the uterus on the left side, was ligated in the usual way, Chinese twist being used. After emptying the tumor it was found impossible to deliver the sac without enlarging the abdominal opening, which was accordingly done, the incision extending three inches above the umbilicus. After removing the tumor the cavity was thoroughly irrigated and washed out with hot sterilized water, which, together with the sponges and dressings, was furnished by Mr. Julius Baldauf, of Henderson, Ky. The pulse, which was very feeble, came up wonderfully under the irrigation. The abdominal wound was closed, a glass drainage tube being left in with a provisional suture for closing the opening after removal of the drainage tube.

The subsequent history of the case is given by Dr. P. Ligon, of Rhobards, under whose care Mrs. G. was during my absence. As the treatment after operation in these cases is almost if not quite as important as the operation itself, Dr. Ligon deserves praise for his efficient conduct of it.

"Operation, June 14, 10 A. M.; Mrs. G., ovarian cyst; weight of patient before operation, 136 pounds—twenty days after operation, 90 pounds. Recovered from shock of operation and from anæsthetic well. Tablespoonful of hot water was given every three or four hours; vomited very often. Temperature at 6 P. M., 99° F.

"June 15th.—Temperature 7 A. M., 98.5°; 6 P. M., 98.5°. Vomited several times during the day. At 8 P. M., enema of whisky and milk. Vomited none through the night.

"June 16th.—Temperature 7 A. M., 98.5°; 6 P. M., 100°. Stomach quiet. ℥ij Rochelle salts were given, followed by enema of warm water at 6 P. M. Bowels moved twice during the night.

"June 17th.—Temperature 6 A. M., 98.5°; 6 P. M., 99.75°. No vomiting. Peptonized milk taken every two hours. Drainage tube was removed at 8 A. M. ℥j Rochelle salts given, followed by several actions from bowels during the night.

"June 18th.—Temperature 98.75°, 6 A. M.; 6 P. M., 98.5°. Rested well and feels well.

"June 19th, 20th, and 21st.—Temperature normal. Appetite good. Stitches removed.

"June 22d.—Sat up some and has good appetite.

"June 28th.—Had slight attack of malaria, which was easily controlled by quinine.

"July 10th.—Took the train for Henderson to make a visit."

Saw Mrs. G. on 11th July. Recovery perfect. Those present at the operation were Drs. John Young Brown, Arch Dixon, Jr., of Henderson, Thos. Bethel, P. Ligon, L. Cottingham (who kindly and efficiently gave the anæsthetics), L. Royster, of Cairo, Ky., and Dr. R. H. Moss, of Corydon, Ky. The main object in reporting this case is to call attention to the method of drainage, which was by the usual glass tube (Keith's), perforated near the bottom, placed in Douglas' sac and covered with iodoform gauze. The tube was emptied at short intervals by a piston syringe with a piece of rubber tubing attached. On the first day, two ounces of bloody serum were withdrawn, three ounces on the second, and two and a half on the third. The tube was removed on the fourth day. To my mind Keith's tube is a good one, but it is a trap-door for infection: the door is almost constantly open, and each time the syringe is used your patient is in danger. There can be no doubt that the intestines are the best of all drainage tubes, but there are cases in which the secretions are of such a character that the bowels cannot be relied on to remove them, and then artificial drainage is imperative. Keith's tube is perhaps the best, but could not something be contrived which would do away with the necessity for emptying this tube by the ordinary piston syringe with the rubber-tubing attachment? I have thought that perhaps if the glass tube was filled with strips of sterilized gauze, the strips being the full length of the tube, that the cavity could be kept drained by capillary attraction. If it became necessary to wash out the cavity through the tube, the strips could be removed for that purpose and be replaced again when the injection was finished. Be this as it may, I have known several cases in which secondary infection took place through glass tubes. To surgeons living in large cities, with the advantage of hospitals, well-fitted up operating rooms, and above all, of well trained nurses, this may seem a very ordinary case to report, but situated as country surgeons are, without any of these advantages, we have reason to congratulate ourselves upon the successful termination of operations of much less magnitude than the one mentioned.

The *Columbus Medical Journal* says the weight of experience is that cocaine is more likely to show its toxic properties when injected into the urethra than when used anywhere else.

SOCIETY REPORTS.

HARLEM MEDICAL ASSOCIATION.

Stated Meeting, January 6th, 1892.

Dr. T. H. Manley presented a patient on whom he had operated for hæmorrhoids. Formerly the practice was to give ether and tie or remove these masses, and frequently much loss of blood would ensue with consequent shock. Should the patient be the subject of tuberculosis or syphilis, a chronic ulcer was apt to remain after the operation. A rectal stricture was occasionally noticed after the older methods of operation for hæmorrhoids. Any method which would tend to do away with these dangers must be of advantage. While in Paris, I saw Verneiul operate without general anæsthesia, using cocaine alone. The patient need not tie up and is often able to walk home after the operation. The patient I show you came to the hospital one week ago suffering intense pain from very large internal and external hæmorrhoids. An enema was given and the lower bowel disinfected. The index finger was then inserted in the rectum and a number of injections of a 1 per cent. solution of cocaine were employed, going around the anal margin and along side of the rectal wall. The total amount of the solution used would have made about 100 drops. The sphincter was then stretched with the fingers, and finally, the whole rectum was dilated first with the fingers then by a duck bill speculum. Little or no pain was caused. Since the operation—one week ago—the hæmorrhoids have been reduced to one-fifth the previous size. One great advantage in this way of treating piles is that one physician can perform the operation without any assistance—thus saving the patient expense.

Dr. Van Santvoord: I tried the method of manipulation described in this case and to advantage but used general anæsthesia by ether.

Dr. Gibbs: I also have used this method of dilatation for hæmorrhoids, but employed ether. I can understand the great advantage of employing cocaine and will make use of the suggestion.

Dr. G. H. Cocks: What amount of cocaine would Dr. Manley consider safe to be administered?

Dr. Manley; I have never employed more than I did in the patient before you, viz.: 100 drops of 1 per cent. solution—about 1 grain. I have never seen any evil effects follow the employment of the drug in my hands. One observer has reported 700 cases in which cocaine was used with a maximum dose of 2 grains with no unfavorable results.

Dr. Heiman related a case of a lady who had a fish bone fastened in her throat for one year and three days before removal. At the time it became lodged there, several physicians made the attempt to extract it without success, and as considerable blood was lost, she declined further treatment at the time. There had been no further suppuration, but there was considerable inconvenience in swallowing. When I saw her I employed cocaine freely in the pharynx, and with the mirror was able to detect the end of the bone protruding $\frac{1}{12}$ of an inch above the mucous membrane behind the posterior pillars of the fauces. With a pair of bone forceps I was able to extract it and present it for your inspection. You will observe it is nearly $1\frac{3}{4}$ inches long.

Dr. T. H. Manley read a paper on the Pathology and Treatment of Diseases of the Hip, Knee and Ankle Joints in Children. (See p. 326).

Discussion—Dr. Jas. E. Kelly: I would endorse what Dr. Manley has so ably presented to us to-night. As a supplementary method of treatment of disease of the ankle-joint, I wish to show you an instrument which I invented some 10 years ago and which may yet be new to some of the physicians present. This model of club foot will show the principle involved. The shoe is supplied with a heavy tin sole somewhat saucer-shaped on the bottom and extending two or three inches on the outside from the foot. A band is placed around the calf of the patient's leg and elastic bands are run from this to the margin of the metallic sole. Thus, when the foot is implanted on the floor, the tendency is to assume the normal position, and with the rubber bands any amount of rotation required may be obtained. I have had considerable success while using this instrument.

Dr. E. L. Cocks: In diseases of the joints the diagnosis is seven-eighths of the treatment. The treatment is often very simple if we can only make a correct diagnosis. A short time ago I was called to see a child who had always enjoyed robust health, but was now confined to bed with considerable pain in the left hip-joint. The thigh was flexed on the body, and any motion of the limb gave him much pain. There was no history of tuberculosis in the family and the general appearance of the patient was very good, so I did not suspect tubercular inflammation. Ice was applied to the painful joint, and on the third day extension was employed. The patient

then began to feel better and it was with difficulty that he could be kept quiet. On the twelfth day a modified Taylor's long splint was used and still remains in position. It is a question in my mind when the splint should be removed.

Recently a lady patient of mine sustained an injury to her ankle and there was a doubt whether the external condyle were fractured or only a sprain of the ligament existed. She suffered considerable pain and swelling, but on the third day walked out, as the joint appeared to be better. This indiscretion was followed by intense pain and swelling. She now came to me for treatment and I put up the joint in plaster of Paris and kept it thus for three weeks, and when it was removed I found the parts in a perfectly normal condition.

One argument in favor of operation on diseased joints, where tubercles are suspected, is that a general systemic infection may thereby be prevented. A case came under my observation in a child eight years old who had a tubercular joint, and the patient suddenly developed fever and died of acute tuberculosis. Autopsy revealed cheesy masses in the lungs and other symptoms of a general tubercular infection. It is barely possible that if the joint had been excised the patient might not have developed the systemic infection.

Dr. R. Van Santvoord: The subject of the general pathology of joint diseases presents many interesting features. While a student I listened to the teaching of Sayre, who was opposed to "struma." He depended largely on the traumatic nature of joint diseases. Dr. H. P. Loomis has carefully examined the bronchial glands in a great number of patients who appeared during life to be in no wise affected with tubercular disease. It is remarkable in what a large number he found the bacilli of tuberculosis. We all inhale these bacilli, but they are destroyed before the system becomes affected. Suppose now a local injury to a joint and a certain amount of these bacilli are brought to the part by the blood and the power of resistance being enfeebled at the diseased part, a chronic tubercular joint may ensue. This theory may be in opposition to Dr. Manley's statements concerning the local character of many joint difficulties, but it seems reasonable that my proposition may be true. We know that ulcerative endocarditis is more prone to occur if the valves were previously diseased. Dr. Holt published a case of tubercular meningitis in a child, the determinating cause being a fall on the head. A case came under my observation of a supposed tubercular elbow joint. There were no other symptoms present of a tubercular disease. The patient died after a few days' illness of diphtheria. On autopsy a number of tubercular glands were found undergoing cheesy degeneration.

Dr. J. Gardner Smith: At the Vanderbilt Clinic we are accustomed to employ braces in a large number of the cases of joint diseases coming there for treatment. We always keep before us the suspicion of tuberculosis and syphilis and treat the patient accordingly. Dr. Manley must admit that a leg will become atrophied if the joint is diseased when the patient is put to bed for a length of time, even if braces or splints are not made use of. An advantage in the treatment of these cases with splints is that the limb will remain in a straight condition afterward, while if left to nature, it is sometimes so flexed that locomotion is interfered with. A few months ago a boy 10 years old came under my observation who had suffered from hip-joint disease for three years. There was almost complete anchylosis of the hip. No mechanical means had been employed and the knee was in such a position as to be in the way of a crutch. The foot was up against the opposite calf. The patient was put on the mixed treatment and a long splint applied and gradually pressure and traction were made to bring the limb straight. After treatment for three months he can now place the foot almost down to the floor. If the knee-joint is diseased there is hope of retaining its mobility if the patella remains movable. Rest to the joint when injured or diseased is, very often, all that is required. The application of a plaster of Paris splint frequently cures what appears to be a very serious difficulty. Even in cases of spasms of the muscles this treatment is very beneficial.

DR. A. H. LEARY,
Secretary.

NAPHTHALIN IN WHOOPING-COUGH.

Chavernac (*Lyon Médical*, November 15th, 1891) proposes naphthalin as a remedy for whooping-cough. He places about half an ounce of this substance in a capsule over a stove in the patient's room, which thus becomes filled with the vapors of naphthalin. He states that he has thus obtained a cure in a great number of cases. On the other hand, he has found that patients suffering from early tuberculosis cannot tolerate the vapor; he suggests that naphthalin vapor may thus be an aid in the diagnosis of early tuberculosis.—*Brit. Med. Jour.*

SELECTED FORMULÆ.

DYSENTERY.

Dr. Rossbach (*L'Union Médicale,* No. 9, 1891) speaks highly of the following:

℞ Naphthalin.....grains x.
Aq. bullient.....fl. ʒ iv.
Decoct. Malvæ.....0 i.
Inject by the rectum at a temperature of 100°.

ASTHMA POWDER.

℞ Powd. stramonium leaf.....parts 32.
Powd. belladonna leaf..... " 32.
Powd. nitrate potass..... " 4.
Powd. opium.....part 1.
Burn a little and inhale the vapor.

NEURALGIA AND RHEUMATISM.

℞ Tinct. iodine comp.,
Aquæ ammonia.....āā ʒ iss.
Pulv. camphor..... ʒ ij.
Chloroform..... ʒ ss.
M. Sig. Rubbed in three or four times a day.

—*Dr. Baltzell.*

TETANUS.

Dr. Mayer (*Revista clinica de los Hospitales,* No. 28, 1891) successfully treated a case of tetanus following a gun-shot wound of the thigh with the following formula:

℞ Morph. mur.....cgm. 1.
Chloral hydrat.....gm. 1.
Sod. bromid.....gm. 1.5.
Sufficient for one powder. Three to six powders a day.

Recovery followed after the administration of one gramme (15 grains) of morphine, eighty-one grammes 2½ ʒ) of chloral, and ninety-five grammes (3 ʒ) of sodium bromide.

ALUMINUM IN DIPHTHERIA.

Dr. E. Dickenshied, Spinnerstown, Pa., in a paper read before the Lehigh Valley Medical Association, states that aluminum was first used by his father a decade ago, in a case which he supposed to be hopeless diphtheria, as a disinfectant. The patient recovered, and since then 257 diphtheritic patients have been treated with but two deaths. The remedy is used in solutions as follows:

℞ Aluminum chloride.....dr 8.
Aluminum bromide.....dr. 4.
Boiling water.....dr. 64.
M. Sig. Place over a bath until dissolved.

Its local action on the diphtheritic membrane is to loosen it around the edge and to dissolve it rapidly so as to give the edge a very ragged appearance. Its astringent action reduces throat congestion. The solution is also used, in proportion of one to seven of water, as a gargle or in an atomizer, and at the same time the patient takes from five to ten drops.—*St. Louis Clinique.*

LARYNGEAL DIPHTHERIA.

According to Rosenberry, should be treated with the following:

℞ Ol. eucalypti,
Ol. terebinth.....āā ʒ j.
Ol. vaselini..... ʒ vj.
S. Use in a steam atomizer every half hour.

ULCERS AND GANGRENOUS WOUNDS.

Dr. Brown (*Lo Sperimentale,* No. 16, 1891) uses with success in ulcers and gangrenous wounds the following solution:

℞ Zinc sulphat.....grammes 5.75.
Aq. destillat..... " 600.
Acid sulph. dil..... " 16.

The parts are first washed with warm water and then the antiseptic solution applied on cotton. This dressing is changed every three hours. This causes the fœtid odor to disappear and promotes cicatrization.

ACUTE GASTRITIS.

Dr. Menche (*Lo Sperimentale,* No. 18, 1891) recommends the following in acute gastritis with dyspepsia:

℞ Acid mur. pur., } .....āā grammes 2.
Resorcin sublimat., }
Syrup corticis aurantior..... " 20.
Aq. destillat..... " 178.

RINGWORM.

(SHOEMAKER.)

℞ Cupri oleate..... dram ½.
Adipis benzoati.....ounce 1.
M. Fiat ungent. Sig. Use locally.

ERYSIPELAS.

The following (*La Independencia medica,* No. 42, 1891) has been found of service in erysipelas:

℞ Ichthyol..... .....grammes 15.
Lanolin..... " 15.
Rub upon the erysipelatous surface and cover with salicylic acid gauze.

This prevents the spreading of the disease and calms the pain, in two hours to two or three days.

FORMULA FOR HYPODERMIC INJECTIONS OF QUININE.

Dr. Barillé recently stated to the *Société de Pharmacie* that the addition of antipyrine to the muriate of quinine enables the latter to dissolve easily. He recommends the following formula for hypodermic use:

℞ Muriate of quinine. ....grains 15.
Antipyrine .... " 7½.
Distilled water.....drachm ½.

The solution causes some pain when injected; the addition of ⅓ or ½ grain of cocaine would be beneficial.—*La Médecine Moderne.*

CROUP.

Prof. N. S. Davis says all the indications for treatment, in croup, in the mild or superficial form of the disease, can be fulfilled by the administration of:

℞ Syr. ipecac.....ʒ ix.
Syr. scillæ comp.....ʒ iss.
Tinct. opii camph.....ʒ ij.
M. Sig. Half teaspoonful every three or four hours.

—*Ind. Med. Jour.*

TREATMENT OF INFLUENZA WITH CAMPHOR.

During the recent epidemic, when I had on an average 150 cases a week under my care, I had ample opportunity of testing the efficacy of various methods of treatment. Amongst other drugs, I tried camphor, and with so much success that I rarely prescribed anything else afterwards, six doses or less usually being sufficient. I administered it as follows:

℞ Sp. camph.....dr. ij.
Tinct. lavand co.....dr. ij.
Sp. chlorof.....dr. j.
Mucilag. tragacanth.....oz. ij.
Aq., ad.....oz. vj.
M. Sig. One ounce every four hours.

This costs very little, and by leaving out the flavoring agents the effect is the same and the cost nominal.—*F. W. Devereux Long, in British Med. Jour.*

PURGATIVE PILL.

Prof. Hare gave the following formula, which is very efficient:

℞ Aloïn,
Ext. belladonnæ,
Ext. nucis vomicæ.....āā gr. v.
Ext. physostigmatis.....gr. ij.
Fiant pil. xx.
M. Sig. One at night.

—*Coll. Clin. Rec.*

JAUNDICE.

In a case of jaundice, resulting from catarrh of bile duct or biliary colic, which was sent from here to N. S. Davis, of Chicago, he prescribed:

℞ Hydrarg cor. chlor.....grs. 1-16 per dose.
Potassi chloridi.....grs. ii per dose.
Tr. cinchonæ.....ʒ v.
Tr. hyoscyami.....ʒ iii.
Drachm four times a day.

Recovery soon followed.

DIPHTHERIA AND CROUP.

Dr. Gibert, of Geneva (*Le Progrès médical*, No. 48, 1891), employs the following potion in diphtheria and croup:

℞ Pilocarpine.....gr. ½.
Ammon. carbonat.....grs. xxx.
Potass. chlorat.....grs. xlv.
Syrup polygalæ.....fl. ʒ j.
Cognac.....fl. ʒ v.
Aquæ.....fl. ʒ v.
A spoonful every hour until the patient begins to perspire.

TREATMENT OF SCABIES.

The following is given in *La France Medicale:*

Besnier's Method.—The entire body is rubbed with soap for fifteen to twenty minutes. Immediately afterward a lukewarm soap and water bath is taken. The following ointment is then rubbed in:

℞ Ess. iavandulæ,
Ess. caryophylli,
Ess. cannella.....āā ʒ ss.
Gum. tragacanth.....ʒ j.
Kali carbonat.....ʒ vijss.
Flor. sulfuris.....ʒ ijss.
Glycerini.....ʒ xlv.
M. Et fiat ung.

This ointment should be permitted to remain on the skin for twenty-four hours, during which the patient puts on clean clothes, the others being disinfected in the meantime. Then a bath is taken.

Brocq's Method.—This is a procedure adapted to cases in which the eruption is disseminated and to nursing infants. The following is applied:

℞ Ol. chamomil. camphorat.....ʒ xxv.
Bals. styracis.....ʒ v.
Ess. menthæ.....ʒ j.
M.

Or the following which is less irritating:

℞ Ol. olivar.....ʒ xv.
Ung. styracis.....ʒ vj.
Bals. Peru.....ʒ j.
M.

Quinquaud's Method.—The following is used:

℞ Ung. styracis.....ʒ v.
Vaselini.....ʒ xxv.
M.

Or, a weaker preparation, such as:

℞ Bals. Peru.....grains lxxv.
Vaseline.....ʒ xxu.
M.

In nurslings, he recommends:

℞ Ol. chamomil.....ʒ xxv.
Ung. styracis.....ʒ v.
Ess. menthæ.....grains lxxv.
M.

Ernest Besnier uses the following in pregnant women:

℞ Beta naphthol.....grains lxxv.
Ether sulfuric.....q. s.
Vaselini.....ʒ xxv.
Ess. menthæ.....q. s.
M.

This is to be applied daily, for a week, a starch bath being taken every other day.

NEURALGIA.

We find in the *Memphis Medical Monthly* that Dr. W. M. Hightower recommends the following:

℞ Ammonii bromidi,
Sodii salicylatis.....āā ʒ j.
Tinct. hyoscyami.....ʒ ij.
Aquæ.....ad ʒ iv.
M. Sig. One teaspoonful every half hour until relief is obtained, or four doses have been taken.

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LEADING ARTICLE.

TUMENOL.

While the list of new remedies that are constantly being brought to the profession's notice is very large, and the number of valuable ones comparatively small, yet, in spite of a gradually increasing feeling of caution on the part of the practitioner in embracing these newer preparations, those which possess any real merit are usually soon recognized. Thus it is that tumenol, a substance obtained from mineral oils, and recently introduced by the dermatologist, Dr. Neisser, appears to have come to stay, and is certainly daily gaining ground among these specialists abroad. The drug is used only as a topical application, and in the form of tincture, solution, oil, salve, or plaster; and, broadly speaking, occupies a position similar to that now held by zinc, with the exception that the claims for tumenol are even greater than those of the former useful substance, at least, in dermatological practice.

The solution has been proven to act more beneficially in cases of acute recurring eczemas of the face and hands, aud also in both acute and chronic eczemas of the extremities. In such cases it is used in a two or five per-cent solution in the form of a wet dressing. It forms a dry protective skin, and greatly allays the itching.

Neisser has also used the solution and tumenol gauze in the treatment of purulent and other discharges from the vagina; but while the remedy was well tolerated, the curative effects obtained were but slight.

Its greatest usefulness is undoubtedly when used as a salve or ointment of the strength of five or ten per cent. It may be made with vaseline or anhydrous lanolin as a base, and of a varying consistency subject to the requirements of the case. Again, the drug may be added to zinc ointment.

Various writers have repeatedly shown how tumenol ointment may be used with greater efficiency in almost every case in which zinc ointment is now used, and its supporters claim that its superiority over the latter preparation is most marked.

Upon ulcerating surfaces in cases of lupus, contagious impetigo, pemphigus, and the periods of desquamation and exfoliation of various other skin diseases, tumenol ointment is claimed to have been used with signal success.

In dry and squamous periods of various skin diseases the tincture gives better results than the salve. The tincture yields excellent results in almost any erosion accompanied by itching.

Tumenol-soap plaster seems to act better and more rapidly than either the plain or salicylated plaster. The oil when applied to the vesicles of eczematous patches acts promptly and beneficially.

Neisser has also used finely powdered tumenol-sulphonic acid as a dusting powder on ulcerating surfaces with excellent results.

In conclusion, the most recent reports of the drug justify our recommending it as a quick drier, a reducer of inflammation, and a healing and soothing application in eczemas, erosions, excoriations, superficial ulcerations, and various forms of pruritus. Its action upon the infiltrations of eczema is but slight, its beneficial influence being confined to the superficial, catarrhal, or desquamative forms of the disease, and especially in the acute forms.

The drug is undoubtedly a valuable one and deserving of serious consideration and trial.

CHROMIC ACID IN SYPHILITIC AFFECTIONS OF THE MOUTH.

For a long time past various largyngologists have recognized in chromic acid a valuable remedy for many diseases of the mouth and pharynx. Its special value is in syphilitic affections of this region, and within a recent date many writers of note have sought to bring the subject before the profession through the medium of medical journals. Among the most recent writings on the subject we have before us those from the pens of Schuster, Vidal, Paget and Feibel.

In placing the results of their experiences before our readers, we merely hope to give them points regarding the most judicious methods for the application of the drug, laying no claim for the introduction of any new therapeutic means, since, without doubt, chromic acid has long been recognized as one of our "stand-byes" in the treatment of syphilitic affections of the mouth.

Schuster has made it a practice first to scarify the syphilitic patches, and then apply a concentrated solution of the acid to the parts. This procedure he repeats once or twice a week until a cure is obtained. His results have been most gratifying.

Vidal, in similar affections uses a caustic solution of the acid (1 to 8, or equal parts of water). This he applies locally for one or two minutes, and then washes the parts with clean water. The treatment is repeated every three or four days until a cure is obtained.

Paget's contribution to the subject consists mainly in a record of the remarkable success which has attended the use of the acid in cases of lingual psoriasis.

Bethin, the London laryngologist, recommends the local application of the acid in cases of chronic superficial glossitis occurring in subjects who have previously had syphilis, and found mostly among habitual drinkers. Another writer, Butlin, recommends the local application of chromic acid three times a day, in the form of a half per cent. solution, as being most valuable in cases of ulcers of the tongue.

Finally, Dr. Ernst Feibel has used the acid in a variety of syphilitic affections of the mouth with such success that he has discarded all other remedies for it. He uses invariably a cauterizing solution of one part of the acid to two parts of water. In cases of syphilitic ulcers of the tongue when a long continued internal treatment had yielded no results, a few applications of the acid produced a complete disappearance of the sores. In these cases the remedy should be applied about every second day, and a week will usually suffice to bring about a cure. In cases of indurated lumps on the tongue a very few applications will effect a cure. The "opaline plagues" also disappeared quickly under its use, as well as ulcers in the angles of the mouth.

In that most troublesome and stubborn form of oral syphilis, described as *lingua geographica*, no other remedy acts in so potent a manner as chromic acid. In such cases the tongue should be first dried, then the solution applied with a camel's-hair brush, and after a few minutes the parts carefully washed. The cauterized tissue will be thrown off in the course of three or four days, and the normal tissue will be found under it. Four or five applications during the course of about two weeks will usually effect a cure. Naturally, cases have been reported in which the remedy did not give entire satisfaction. But in the large majority chromic acid will be found of inestimable value in syphilitic affections of the mouth, bringing about an immediate beneficial action, and leaving as a result a healthy condition of the mucous membrane.

BOOK REVIEWS.

DISEASES OF THE BLADDER AND PROSTATE. By Hal. C. Nyman, M. D., Prof. of Surgery in the Mich. College of Medicine and Surgery; Member American Medical Association, Mich. State Med. Society, Mich. Surgical and Pathological Society, Detroit Academy of Medicine, Surgeon to Detroit Emergency Hospital, etc., etc. The Physician's Leisure Hour Library. Pub. by Geo. S. Davis, Detroit, Michigan.

Another small book having the above title, and one of the series intended to instruct physicians during their "leisure hours," has made its *début*, and will doubtless prove interesting to a certain class of readers who really appreciate the conciseness which is the chief reason for the popularity of this series. The present volume is an exceedingly useful one, and gives a careful resumé of the best and latest knowledge concerning the bladder and prostate, at the same time the author has not failed to insert his personality, and here and there records interesting cases to emphasize a remark. A great deal of technical knowledge is of course included, since it is necessary, seemingly, to satisfy the popular thirst for rules, methods, and explicit indications of all kinds upon the subject of operative procedures. Still, the author has also fairly presented the *principles* which should always be considered more important to the thoughtful surgeon than mere operative technique. In discussing supra-pubic cystotomy, which at the present time is so variously viewed by good surgeons, he takes middle grounds very wisely, and inclines to the more conservative side of the controversy.

As a book of ready-reference, and as a good synopsis of what is known concerning this section of the genito-urinary surgery, we cheerfully recommend it to the profession.

THE PRINCIPLES OF BACTERIOLOGY. A Practical Manual for Students and Physicians. By A. C. Abbott, M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania, Philadelphia. In one 12mo volume of 263 pages, with 32 illustrations. Cloth, $2.00. Philadelphia: Lea Brothers & Co., 1892.

The author of this new and shorter manual upon the principles and technique of the science of bacteriology has succeeded in getting together in compact and readable form much practical and useful knowledge upon this subject, especially for the beginner. The work is divided into two parts, the first of which tells exactly the materials to be used and the *rationale* of their employment, while the second is devoted chiefly to the description of their practical application in making bacteriological examinations. The illustrations of apparatus, etc., add value to the text, and it is only to be regretted that plates showing some the more commonly met with organisms were not included. We already have, however, in the works of Peyer and Cruikshank, at least two good books for more advanced students, and the present addition to our list must be considered a valuable one, since it presents in concise language most explicit directions for dealing with bacteria in the laboratory. We heartily commend it to students and physicians.

NO. 12. PHYSICIANS' AND STUDENTS' READY-REFERENCE SERIES. SYPHILIS IN ANCIENT PREHISTORIC TIMES. By Dr. F. Buret, Paris, France. Translated by A. H. Ohmann-Dumesnil, M. D., Prof. of Dermatology and Syphylography in St. Louis College of Physcians and Surgeons, etc. F. A. Davis, Publisher, 1891. Price, $1.25.

The present number of this series is the first of three volumes to be issued upon syphilis, and therefore fittingly gives its history as far as Buret has been able to trace it. The mass of evidence which he has most ingeniously put together goes to show that syphilis is a very old disease. The author certainly deserves credit for his labors in this direction, and for presenting to us all the available facts which throw light upon the history of such an important malady. The subject is exhaustively treated, and all proofs of the existence of the disease in prehistoric and early

historical periods of each nation of the earth have been carefully collected and utilized by the author in forming conclusions. To everyone interested in the study of syphilis this little book will be welcome. The translation has not detracted from the value of the work, and, on the contrary, credit is due to Dr. Ohmann-Dumesnil for the very readable book he has produced, and also for his excellent notes with which it is interspersed.

LITERARY NOTES.

—A Journal of Pathology is about to be published in London. The new journal will be under the editorial charge of Dr. Sims Woodhead, who will be assisted by the principal pathologists of Great Britain and Ireland as collaborators and co-editors.

—W. B. Saunders announces the early appearance of several important works: An American Text-Book of Surgery, by Drs. Keen, White, Burnett, Conner, Dennis, Park, Nancrede, Pilcher, Senn, Shepherd, Stimson, Thomson, and Warren; also an American Text-Book of the Theory and Practice of Medicine, edited by Dr. William Pepper, to be completed in two royal octavo volumes. The writers for this work are Drs. J. S. Billing, Francis Delafield, R. H. Fitz, James W. Holland, E. G. Janeway, Henry M. Lyman, William Osler, W. Gilman Thompson, W. H. Welch, James T. Whittaker, James C. Wilson, and Horatio C. Wood. These books will be sold by subscription. Besides, he announces a New Pronouncing Dictionary of Medicine, by John M. Keating, M.D., and a work upon the Diseases of the Eye, by G. E. de Schweinitz, M.D.

WASHING BLANKETS MADE EASY.

If one has a suitable place for the purpose, the washing of blankets may become an easy matter, says the January *Ladies' Home Journal.* In an open space have a line tightly stretched out of doors. To this fasten the upper edge of the blanket. Have strips of cotton sewed to the bottom at intervals; tie these to pegs, which drive well into the ground. Now *turn on the hose.* Cold water, of course, and plenty of it. Drench the blankets well on both sides. If much soiled, rub spots with soap and drench again. The force of the stream will do more than wringing. After the article is quite clean, leave it to dry; never mind if it does rain; if the work has been thorough it will not streak, but be all the better for it. When the sun has completed the task, you will possess blankets as white, soft, and unshrunken as new, and the nap will not be destroyed.

PERISCOPE.

THERAPEUTICS.

COCAINE IN PERITONITIS.

Dr. Julius G. Kiefer states, in the *Kansas City Medical Index,* that the distressing pain and vomiting of peritonitis may be promptly checked by a suppository containing one grain each: extract of opium, cocaine hydrochlorate, and iodoform. It will be safe to use one suppository per rectum four hours apart, if the patient is closely watched for toxic effects, which may be noted by cold extremities and enfeebled heart action. I was led to the employment of the above on the theory of the malignancy of the affection and reversed peristaltic action of the bowel in peritonitis, and the well known anæsthetic properties of cocaine on serous membranes. Alimentation should be temporarily suspended, and enema must be avoided until vomiting is checked.

Any discussion will be thankfully received.

TREATMENT OF YELLOW FEVER BY COLD.

It is well known that yellow fever never develops in a cold or temperate climate, and several attempts have been made at various times to apply this fact to the treatment of the disease in tropical climates by artificially cooling the patient. Thus some thirty-five years ago trials were made with a cold chamber, the air of which was charged with oxygen, but without appreciable success. Quite recently Dr. Garcia has reintroduced a somewhat similar plan, an iced chamber being constructed so that the air within should be maintained at a temperature varying from 32° to 50° F., and nearly saturated with moisture. A fair trial was made with this at the works of the Juragua Iron Company in Cuba, where an epidemic of yellow fever had broken out, seventeen well-marked cases, in all of which black vomit was present, being treated by means of the "polar chamber." Eleven of them recovered, the mortality consequently being at the rate of 35.3 per cent., or about the same as the usual rate of mortality at the mines under other methods of treatment. The course and duration of the disease did not appear to be in any way modified by the low temperature; the urine, though in some cases considerable increased, was not altered qualitatively. The phenomena

depending on acholia occurred in the same manner and at the same period as in cases treated in the ordinary way. The same may be said of the gastric hæmorrhage. The cost of a patient's treatment by cold was found to amount to about $100.—*Lancet.*

ON THE EFFECTUAL AND SPEEDY CURE OF INFLUENZA.

Dr. John Crerar says, in the London *Lancet:* I have formed a new theory of the treatment of acute infective diseases, based on the "analogy of nature," whereby is meant such an inference, for example, that the earth is globular from observation of the uniform shape of other heavenly bodies. Applying this to the study of micro-organisms, I infer that their life and reproductive activity depend upon their inhabiting suitable nutrient media under fit conditions. Thus Klein tells us that a cubic centimeter of beef-tea, kept in an incubator at a temperature of 98° Fr., and peopled by bacilli, multiplies its population 80,000 times in the first twenty-four hours, 450 times in the second twenty-four hours, and only five times in the third twenty-four hours. We thus find that, as the food supply diminished, and the peculiar product of the fermentative process increased, the reproduction gradually declines and ultimately disappears. During the process of reproduction and growth of a micro-organism there is a peculiar substance excreted, or formed, which is baneful to its own microbe, and as this substance increases in quantity it diminishes the vitality of the microbe, and when it reaches a certain proportion it destroys the life of its microbe. When the yeast fungus is placed in an infusion of malt, it grows rapidly, at a suitable temperature, until the alcohol formed in its presence accumulates to twenty per cent. of the whole quantity of the liquid; the alcohol then arrests the growth of the fungus, and the alcoholic fermentation proceeds no further. In the same way, Dr. Burdon-Sanderson has shown that the peculiar secretion of a bacillus is very destructive to the bacillus itself. These facts are of the highest importance when pathogenic fungi are considered in their relation to disease. The application of such facts to the treatment of infective diseases would, then, consist in bringing about in the system a change in the environment of the microbes analogous to that which is spontaneously effected by their own activity, since they apparently excrete products which in sufficient quantity are inimical to their own existence. Hence the possibility of a disease exhausting itself, as it were, without any treatment, provided that the vital powers of the patient can resist the poison more than the microbe that produces it.

It appears, then, that we are continuously liable to attack, but if we can by any means (and I think we can) so alter the state of the body as to make it intolerable to the minute invaders, we secure a valuable truce and gain time to allow the organism to build up a vitality high enough to get beyond the reach of our remorseless foe, and we may thus save our patient. Hitherto the search for such a desirable agent has been chiefly carried on in connection with the cultivation and study of the pathogenic microbe. I propose to look for a similar substance in connection with the changes which invariably take place in the system of the patient during the acute stage of disease—I propose, in fact, to transfer a baneful and death-producing plant—the pathogenic fungus—from its congenial soil and climate in the tropic, to the uncongenial soil and climate of the Poles; and I confidently expect that, in its new situation, it will not long retain its power to do harm. I have practically applied this theory to the treatment of influenza with the happiest results. In the epidemic of 1889–90, I was face to face with an extreme case of this disease, when it was quite clear to me that something more than treatment upon general principles was necessary if I wished to save my patient. A process of reasoning, similar to what I have tried to explain, occurred to me at that time; and acting promptly on the indication to which it pointed, I artificially altered the prevailing state of the patient, with the result that the disease very speedily disappeared. I subsequently repeated my new line of treatment in hundreds of cases, with the same fortunate results. During the present epidemic (1891) I have pursued similar tactics with identical similar consequences. Let me briefly explain what has been occurring. I am called in to see a patient. I find him with a flushed, woe-begone face; intense frontal headache; increased temperature, at the same time perhaps that he is complaining of cold or shivering; a quick pulse, great prostration, and unspeakable distress. I prescribe, and when I visit him next day I find all the acute symptoms gone; no distress, pulse and temperature normal, and the patient comfortable, but weak. On inquiry, he declares, in nineteen cases out of twenty, that the relief was obtained after the second dose of the medicine—that is, within four or six hours after the commencement of the

treatment. Let me instance two cases as typical examples of many others.

Case 1.—Mr. T—— is extremely ill, and believes himself to be dying; pulse 117, with the other acute symptoms mentioned. I venture to assure him that he will be nearly well by to-morrow. Next day I find him quite relieved, and the pulse reduced to 61.

Case 2.—A. F——, a young married woman, who was taken suddenly ill, and when I first saw her she was raving and could not be made conscious of my presence. The next morning she was well, but weak, and I was assured that the second dose of the medicine marked the time of the amendment. On the third day she was quite well, dressed, out of bed, and attending to her duties in the house.

But I have not yet stated the exact nature of my *modus operandi*. Very important results can be obtained through very simple means. In the days of Sir Thomas Watson, the most intelligent answer to questions, "What is the best cure for acute rheumatism?" would be, "Six weeks in blankets, aided by drugs administered on general principles." But the salicylate of soda has changed all that, and has given us a short cut towards getting rid of the excruciating tortures of acute arthritic inflammation of a rheumatic nature; and so with other affections. Having regard to the essential state of a severe attack of influenza, I conceived that I would get the most effective antagonism in greatly increased alkalinity, and the *bicarbonate of potash* was the first agent I thought of. This salt has many advantages. It is not unduly stable to make it difficult to break up in the system. It is also readily eliminated, and thus soon leaves the system; so that the danger of potash poisoning is reduced to infinitesimal proportions. Having found this salt to answer all my purposes, I have not looked for another, although, according to my theory, other remedies of similar nature might easily give like results. I give liberal doses (thirty grains) in a teacupful of milk every two or three hours. I add a few drops of the tincture of capsicum, but this is not at all essential.

A word or two of caution. In two or three cases the action of the heart was weakened to an unpleasant degree; but digitalis and the aromatic spirit of ammonia quickly restored normality. Diarrhœa also sometimes supervenes, but is effectually met by Dover's powder. In cases where weakness is induced by previous disease, or where some other disease was a concomitant, or where pregnancy existed, the action of the remedy was somewhat retarded, but not rendered by any means less certain. Where the salt was intermitted too soon, the symptoms returned; but they readily gave way again on the resumption of the treatment. I trust that those who have the opportunity, will test the accuracy of my statements by careful clinical observations, as I feel confident they will obtain equally favorable results; for the remedy acts uniformaly and satisfactorily: *tuto, cito, et jucunde.*

MEDICINE.

CEREBRAL SYPHILIS.

As a result of his observations during a long experience, Tarnowsky (*Archiv. f. Dermat. und Syphilis*, No. 3, 1891) excludes progressive paralysis and tabes from among the manifestations of syphilis of the nervous system. It is his view that the debilitating influence of syphilis merely prepares the way for the development of progressive paralysis and tabes in those in whom there exists a congenital predisposition to these diseases. Tarnowsky makes the further proposition that if, in cases of syphilis with nervous manifestations, tabes and progressive paralysis can be definitely excluded, 90 per cent. will be cases of cerebral syphilis, in the majority of instances susceptible of cure.—*Monatshefte f. prakt. Dermat. und Syphilis*, July 15, 1891.

THE BACILLUS OF CHOREA.

Berkley (*Johns Hopkins Hospital Reports*, Vol. II, No. 6) reports one case of chorea insaniens in a woman and one of ordinary chorea in a dog in which he has made most careful post-mortem examinations. He concludes his paper with these remarks: "It would seem that chorea might be considered as a general systemic affection, acting with greatest intensity on the vascular system and lepto-meninges, and that its cause is to be sought for in a special bacillus or its toxical product, not a coccus, the staphylococcus aniens being only an accompaniment to the other germ, as in many other infectious diseases. The so-called "choreakörperchen" of Flechsig and Wollenberg are, so far as I am able to judge from the first writer's description, by no means peculiar to chorea; if I mistake not, they are to be found not only in the globus pallidus, but in other parts of the brain, not only in this affection, but also in normal as well as diseased brains.—*Univ. Med. Mag.*

ALCOHOLIC NEURITIS.

Dr. Ernesto Bruschini, of Naples, Italy (*La Reforma Medica*, p. 361, 1891), in a clinical lecture on alcoholic neuritis, recommends: Removal of the cause, hypodermic injections of morphine; antipyretics and analgesics are to be avoided, as they have a debilitating action. Hydrotherapy in general has an excellent influence. Electricity is also of service. In two cases of multiple neuritis the strong faradic current was found efficacious, one pole being held in the patient's hand, and with the other the current was run through the patient's entire body.

PAINS OF CENTRAL ORIGIN.

In discussing whether pain arises from central disease, Dr. Edinger (*Deutsche Zeitschrift für Nervenheilkunde*, Bd. i.) cites the case of a woman, aged 48, who had a slight apoplectic attack three years after the occurrence of endocarditis. The initial symptoms of the stroke were disturbances of sensation in the right limbs and slight transient defect of consciousness. Paralysis of these limbs, with hyperæsthesia and intense pains in the whole of the right half of the body, next developed. Eight months later slight athetosis in the palsied limbs and partial contracture in the arm were superadded. Temporal hemianopsia of the right eye was noted later. The constancy and agonizing character of the pains led to suicide two years after the fit. A small focus of embolic softening was found in the dorsal portion of the external nucleus of the left optic thalamus, extending backward into the pulvinar and slightly involving the internal capsule at the posterior region of Charcot's sensory crossway, the affected fibres apparently belonging to the temporal and occipital radiations. Secondary degeneration of fibres in the mesial portion of inner third of the corresponding crusta was seen. From the level of the posterior corpora quadrigemina downwards the left superior fillet showed fewer fibres than the right. In the medulla, above the piniform decussation, this degeneration affected the whole transverse section of the fillet, being more pronounced in the ventral half. When tracing the relationship between the clinical symptoms and the existing pathological anatomy, Dr. Edinger points out that the absence of degeneration in the pyramidal tracts and of exaggerated knee-jerks in this patient would appear to indicate that the disease of the thalamus has some influence in producing late rigidity. Between athetosis and typical posthemiplegic hemichorea many transitional grades of motor impairment have been noted by various observers. He is disposed to accept Charcot's view that these conditions depend upon destruction of fibres in the hinder part of the thalamus. The rare condition of hemianopsia, from capsular disease, without hemianæsthesia, was probably due to the small extent of the primary lesion. The pains and hyperæsthesia were presumably the consequence of direct contact of sensory fibres with the diseased patch. Descending degeneration of the cortical fillet has several times been observed in connection with disease of the posterior segment of the internal capsule, with or without involvement of the thalamus; hemianæsthesia usually has been associated therewith; very rarely has pain or hyperæsthesia been noted.—*Brit. Med. Jour.*

DOUBLE UNIOCULAR DIPLOPIA.

Thompson, a the recent meeting of the American Ophthalmological Society reported (*Ophth. Rev.*, September, 1891) the case ot a lady, aged 34, who was stunned in a railway accident, and cut in the fronto-temporal region. At first she had homonymous diplopia from pressure on the scar, and paresis of the left external and superior recti muscles. Later she saw double with either eye alone, the images being distinct and separated diagonally upwards and to the right. Tested at various distances and in different ways, her account of the phenomena was consistent. Central vision was $\frac{20}{200}$ and there was great contraction of the visual fields. There were no ocular conditions to account for the impairment of vision or the diplopia. There seemed to be no other evidence of traumatic hysteria, but the opinion was that it was of hysterical nature as most of the recorded cases were. But it was admitted that it was sometimes a symptom of organic cerebral disease, and would then point to a lesion of the occipital lobe.—*Brit. Med. Jour.*

A NEW CLINICAL FORM OF DIABETES.

In an exhaustive paper, Dr. F. Hirschfeld deals with what he considers a new clinical form of diabetes mellitus; and his conclusions may be given briefly. In the majority of patients suffering from diabetes, notwithstanding the considerable amount of food introduced, assimilation continues good; but in a small number the ingestion of albumen and fat is very markedly diminished. This complication remains unaltered in the same patient for a long time. It does not appear that it results from disturbance produced by the

increased amount of food, for most diabetic patients are quite free from it, only a certain proportion being affected by it in a high degree. In no other disease known to us is a similar disturbance of the absorption of albumen and fat observed. The assimilation of fat only is affected in intestinal disorders, and especially in jaundice is much decreased. Whether the diabetic disturbance of assimilation always affects at the same time the two food-stuffs, fat and albumen, is not certain, although it is very probable. Certainly in all cases the lessened ingestion of albumen is evident. The absorption of carbohydrates was always good in the cases observed. The researches of Von Mering and Minkowski on the production of glycosuria, and impaired absorption of food, in the dog after removal of the pancreas, point to the relation of this complication of human diabetes; but it is still not very clear why so many diabetics possess such good assimilation. Clinically, there is a history of frequent and severe attacks of colic, at or prior to the beginning of the disorder, which do not recur later on. One of the most striking of the symptoms is that polyuria is absent, or present in only a slight degree. The urine accordingly appears of relatively dark color, and has frequently a sediment. The fæces are at times pale-colored, but to the naked eye there is no fatty matter apparent. The prognosis is most unfavorable; the explanation of this being that the nutrition of the organism must be carried on under great difficulties.—*Zeitschrift für klin. Medicin*, parts iii. and iv., 1891.

INFLUENZAL INSANITY.

It is rather alarming to be told by so eminent an authority in lunacy matters as Dr. Savage that attacks of influenza have proved to be a potent factor in developing latent weaknesses of the nervous system. The fact that no less than thirty-three cases of this kind came under his observation during, or soon after, the great epidemic, shows that it is a complication numerically of sufficient importance to merit more than a passing notice. There seems to be no disease of the nervous system specially referable to the action of the poison of influenza. All varieties may supervene, from suicidal melancholia to delirious mania, and from neuralgia to homicidal insanity. He narrates one case, indeed, which points to the possibility of influenza possessing a medico-legal interest. A man previously of exemplary conduct developed homicidal propensities during the period of intense mental depression which followed an attack of influenza, and though he fortunately did not kill his youngest child, as he intended to do, the impression left upon his mind amounted to delusional insanity, causing him to give himself into custody as having committed the crime. Had this explanation been broached earlier in the day, numbers of kleptomaniacs and other police small fry might have pleaded post-influenzal neurosis as an excuse for, if not as a justification of, the offences with which they were charged. Dr. Savage considerately vouchsafes a word of comfort in respect of the liability to nervous diseases. He tells us that, so far as he was enabled to make out, influenza was the precipitating and not the prime cause of the morbid process. In nearly all the cases symptoms of disorganization had been manifested prior to the attack of influenza, or the patient came of a highly neurotic stock. The number of people, therefore, who are likely to develop general paralysis or break forth into fits of maniacal excitement after influenza is comparatively small, and for this assurance we must be grateful.—*Med. Press.*

SURGERY.

SOME POINTS IN THE ADVANCEMENT OF THE OCULAR MUSCLES.

The principal points in Dr. Howes' paper read before the *N. Y. State Medical Association* were as follows:—

1. The necessity of always dividing the opposing muscle in cases of advancement. 2. In making the tenotomy, it is not well to attempt to secure the muscle by stitches. Still worse is it to divide the muscle, and then try to find it after it has retracted in the surrounding tissue. The best way is to secure it with a clamp. The clamp forceps formerly proposed by De Wecker are so large that it was necessary to remove them in case the patient was restless or vomited during the operation. A form of a clamp was shown by the writer, which is only about one and one-half inches long, very light but strong. After these forceps once clasp the tendon of the muscle firmly, it can be divided, and the instrument can then be left in place in spite of any struggles or movements of the patient. 3. In the introduction of the stitches, it is best to follow in general the plan proposed by Prince. The writer, however, modifies this by making a sort of "B" shaped loop through the conjunctiva, near the cornea, the perpendicular part being tangent to the edge of the cornea, then through each of the

loops a stitch is passed, from the corresponding corner of the divided tendon. By tightening the stitches, the muscle is advanced to the cornea. If any puckering of the conjunctiva occurs, this is snipped off. In this way, the muscle is not only held accurately in place, but the resulting cicatrix is smooth and produces no deformity. 4. In all cases, an overcorrection should be made, and the degree of that varying with the refractive condition of the eye, according to the well-known tendency to greater divergence in myopia than in emetropia or hypermetropia.

A NEW METHOD OF ESTABLISHING A GASTRIC FISTULA.

Dr. Witzel, of Bonn, describes a recently devised modification of the technique of gastrostomy, which, it is asserted, will prevent the escape of gastric juice, which in many instances causes so much trouble after this operation. The object of this procedure is to establish a canal, formed by stitching together the free borders of two parallel folds of the exposed wall of the stomach. This canal extends obliquely from the right downward and to the left, where it communicates with a small opening made into the interior of the stomach, and an arrangement is thus established which resembles the lower extremity of the ureter as it passes obliquely through the wall of the bladder. It is necessary, in practising this method, to draw a large extent of the anterior wall of the stomach through the external wound. This, it is stated, can be readily effected, when the stomach is collapsed, by gentle and prolonged traction. Two parallel folds following the above-mentioned course are then taken up, the free margins of which are brought together by three or four Lembert sutures, and by numerous ordinary sutures, over a flexible tube of the thickness of a lead-pencil, the lower end of which tube is inserted into the small opening made into the stomach, while the upper end is intended to project from the external wound. The canal thus formed, which should be about one and a half inches in length, is left exposed at the bottom of the wound when the stomach is fixed by sutures to the margins of the external incision. This modification does not necessitate any change in the other steps of the operation, and the surgeon can make the external wound according to his usual practice. Witzel exposes the sheath of the rectus by an incision made parallel to, and at a distance of a finger's-breadth from, the margin of the ribs; then, as is done is House's operation, he separates the fibres of this muscle in a vertical direction, and incises the transversalis obliquely from above downward and from the right to the left. The division of the rectus thus crosses the wounds made through the skin and the transversalis. Witzel, who has operated in the manner described on two patients, has had good reason, he states, for being well satisfied with the results, and believes that his expectation of establishing a gastric fistula capable of being effectually closed by valvular action has been fulfilled —*Centralblatt für Chirurgie.*

TO REMOVE FOREIGN BODIES FROM THE EAR.

Dr. Olivenbaum (*Norsk. Mag. for Lægevidenskaben*, No. 11, 1891) had a young gypsy boy come to him who, while playing with some glass beads, had gotten one into his ear, so that it rested up against the drum-head. He tried syringing, Löwenberg's agglutinative method—a small brush is dipped into glue, introduced into the ear, and allowed to dry on the foreign body—but also to no use. Pulverized alum warmed over the flame of an alcohol lamp was found to furnish an excellent and quickly-stiffening agglutinative substance. He proceeded as follows: Finely pulverized alum is heated in a teaspoon over an alcohol lamp. A wood splinter is dipped into the alum and then quickly introduced into the meatus, held up against the foreign body until it has stuck fast, when the same may be withdrawn. To prevent burning the walls of the ear, a piece of stiff paper may be introduced to line and so to protect them.

THE OPERATIVE TREATMENT OF GOITRE.

Dr. Bally has investigated the material at Socin's clinic, comprising seventy-seven cases of goitre operated upon between 1887 and 1890. He draws the following conclusions relative to the intra-glandular method of operation, which is preferred by Socin:—

1. Intra-glandular enucleation of one or more struma nodules, no matter what be their character, is feasible in most cases. This operative procedure is excluded, however, in malignant struma, and diffuse hypertrophies of the thyroid gland of a parenchymatous or colloid character, as well as in exophthalmic goitre and goitres containing numerous disseminated nodules.

2. In intra-glandular enucleation, it is necessary to find the layer between the cap-

sule of the gland and the strumous nodules, and this can usually be done without difficulty.

3. The hæmorrhage occurring during enucleation, or subsequently from the empty gland, is not, as a rule, dangerous. In the rare instances in which it becomes serious, there is always time enough to change the operative procedure, and to perform a partial extirpation after ligation of the thyroid vessels.

4. Injury to nerve fibres and the consequent paralysis of the vocal cords, can always be avoided by the employment of the intra-glandular method of operation.

5. As regards the chance of recurrence of tumors in those parts of the thyroid which have not been removed, intra-glandular enucleation gives as favorable results as partial extirpation.

6. The operation was never found to be followed by disagreeable consequences, such as tetany or cachexia.—*Centralbl. f. d. gesammte Therapie*, October, 1891.

MODERN RENAL SURGERY.

Dr. A. Obalinski (*Volkmann's Sammlung Klin. Vort.*), says regarding the treatment of severe inflammatory affections of the kidneys and their sequelæ:

Suppurative inflammation of the kidney and surrounding structures indicates the operation of nephrectomy in order that free exit may be given to the purulent and other inflammatory excretions, and that the focus of the disease may be thoroughly cleansed, and further extension to the suppuration to important parts (as, for example, the thoracic and abdominal cavities and the hip-joint) be thus prevented. In most cases the single lumbar incision, as was performed by Simon, will suffice, but when there has been extensive undermining of the peritoneum the formation of a large flap, as practised by Bardenheuer, is to be preferred, as such operation permits of ready access to all extensions of the main pus-containing cavity.

Ureteral fistula should always be treated by removal of the corresponding kidney, provided the surgeon can assure himself of the existence of a sound renal organ on the other side. Nephrectomy in such cases is indicated, not only on subjective grounds and when, for instance, the external flow of urine cannot be restrained by any apparatus and the patient is thus prevented from following his occupation and from enjoying a comfortable existence, but also on objective grounds, since, notwithstanding the utmost precautions, an old ureteral fistula may result in suppurative inflammation of the corresponding kidney and the adjacent soft parts.

Nephrectomy performed under these last-mentioned conditions offers much less favorable prospects than in cases in which there is an absence of suppuration or of cicatricial adhesions.

There can be no doubt that, under equally favorable conditions, the transperitoneal method can be performed more rapidly and with greater ease than the extraperitoneal method of nephrectomy, and that the progress toward recovery is more speedy after the former operation. The transperitoneal method, however, is not applicable to every case, and should be reserved for those instances in which the mischief is confined within the capsule of the kidney, the extraperitoneal method being indicated when the suppurative process has involved the perirenal structures.

OBSTETRICS.

GALEGA AS A GALACTAGOGUE.

Carron de la Carrière (*Revue obstétricale gynécologique*, February and March, 1891,) wishes to call renewed attention to galega as a galactagogue. He found from numerous experiments that the milk of the mother increased in quantity without any diminution of the quality, and that the children increased rapidly in weight. The aqueous extract is preferred, and can be administered in doses of 15 to 30 grains, three or four times a day.

Galega officinalis, galega apolinea and galega tephorsia are the constituents of the galactagogue, nutrolactis.

EXTRA-UTERINE GESTATION WITH PERFORATION OF THE VERMIFORM APPENDIX.

The diagnosis of disease of the vermiform appendix from pelvic inflammation due to disease of the uterine appendages is often a matter of great difficulty. The co-existence of the two conditions is of special interest, and a case reported in the October-November number of the *Bulletin of the Johns Hopkins Hospital*, by Dr. Hunter Robb, resident gynæcologist to the Johns Hopkins Hospital, Baltimore, is perhaps unique. Rupture of a tubal sac took place early in gestation, and a large hæmorrhagic effusion, presumably of slow formation, took place. The autopsy disclosed also perforation of the vermiform appendix,

a condition that had been suspected during life. Most instructive remarks by Dr. William H. Welch are appended, interesting more particularly with reference to the cause of the patient's sudden death.

MANAGEMENT OF ABORTION.

K. Ter-Grigoriantz, of Tiflis (*Centralbl. f. Gynäk.*, October 24th, 1891) has recently treated 60 cases of abortion with great success, owing to the stringent precautions which he adopted. In 8 the temperature was high, ranging from 100.5° to 105.8° F. In one of the 8 the patient had suffered for a week from fever before the author saw her. Septic peritonitis set in and she died two days after the removal of a broken-down fœtid mass from the uterine cavity. In the second there was a history of rough examinations, conducted by a mid-wife. The case recovered after twenty-five days of fever. The remaining 6 recovered after two or three days of the special treatment. Forty-eight out of the 52, where there were no high temperatures, recovered without any kind of complication. In 2 there was rise of temperature for a few days during convalescence; in 1 perimetritic pains set in, without fever, and passed away within a few days; and in 1 hæmorrhage occurred six weeks after abortion. The author's system was to throw up warm douches twice or three times daily and to give ergot in abortion in the course of the first six weeks of pregnancy. Iodoform gauze tampons were employed when hæmorrhage occurred. When the temperature was high, and in all cases of abortion over the sixth week, the membranes and remains of the ovum were carefully removed. This was done with the fingers alone when the os was still wide enough to admit two fingers. The sharp curette was used to scrape the uterus without the aid of the speculum, and after free washing of the vagina, when the os was wide enough to admit that instrument. When the os was small Hegar's dilators, from 7 to 9 millimeters in calibre, were used, and the sharp curette employed after dilatation. Thirty-nine out of the 60 cases were scraped. The process was done very thoroughly, the scraping being commenced at the point on the endometrium where the curette showed that there was most material to scrape away; then the instrument was made to scrape to the right and to the left of that point further and further out until all that was to be removed was taken away. In no case did any evil result follow the use of the curette. A 3 per cent. solution of carbolic acid was found sufficient to wash out the vagina and uterus in normal cases. When suspicious symptoms were present, especially high temperature, the following solution was used for the same purpose: Corrosive sublimate 1 part, carbolic acid 20 parts, boric acid 40 parts salicylic acid 5 parts, chlorate of zinc 10 parts, dissolved in 2,000 parts of water. For injections the author used a Fritsch-Bozemann's uterine catheter with the inner tube not less than 3 millimetres in diameter, else the fluid would not be able to escape freely and quickly, and the danger of carbolic acid poisoning would be considerable.—*Brit. Med. Jour.*

GYNÆCOLOGY.

THE ABUSE OF CATHARTICS IN GYNÆCOLOGICAL TREATMENT.

Loemer (*Centralblatt für Gynäkologie*, 1891, No. 46) calls attention to the fact that the excessive use of laxatives by women leads to paralysis of the muscular coat of the intestine. This condition can be overcome in time by careful regulation of the diet, sufficient exercise in the open air and massage, with the use of both the faradic and galvanic currents. In one case the writer suspended all laxatives and enemata, and persisted with this treatment for eleven (!) days before a movement of the bowels occurred, but after that they moved spontaneously, and the patient's health began to improve.

TWO CASES OF INTRA-UTERINE TAMPONADE.

Oui (*Arch. de Toc. et de Gyn.*, Sept., 1891) reports two cases in which the method recommended by Auvard in his work on Obstetrics, for the checking of hæmorrhage, was adopted with good results. In the first case (one of abortion at four months with retention of the placenta) the flow had already continued for twenty hours, and although it was not excessive the patient was rapidly losing strength. Efforts at dislodging the adherent placenta were futile. Oui, preferring intra-uterine to vagina tamponade, because of the better chances for antisepsis and the greater probability of its exciting uterine contractions, drew down the uterus, and by the help of dressing forceps packed the cavity with iodoform gauze. The tampon was withdrawn the next day, the placenta followed it, and the patient recovered normally.

The second case was one of placenta previa, in which an alarming hæmorrhage resisted all efforts at hæmostasis, such as intra-uterine

douches of hot water, injections of ergotin, and compressions of the aorta. Syncope was imminent. The iodoform gauze was at once introduced into the uterine cavity by the forceps, and packed with the fingers, also filling the vagina. Hypodermic injections of caffeine and ether, the administration of a punch and the acetate of ammonia were resorted to in order to combat the tendency to syncope. The tampon was removed the next day. Symptoms of septicæmia set in twenty-four hours after the removal, but the patient finally made a good recovery. Infection seems to have been due to direct or transmitted contagion from a patient who occupied the next bed to hers, and who died a few days later from septic peritonitis.

DYSMENORRHŒA AND ITS TREATMENT.

E. L. H. McGinnis (*New York Journal of Gynecology and Obstetrics*, January, 1892) says that dysmenorrhœa is the result of one of the following conditions:

1. Chlorotic or highly nervous temperaments (which are often closely associated).
2. An unhealthy uterus.
3. Inflamed ovaries.

Although not regarding electricity as a cure-all, the author states that the treatment, by this agent, of dysmenorrhœa due to inflammatory conditions of the uterus or ovaries, has yielded, in his hand, results far greater than were ever obtained by the use of tincture of iodine, carbolic acid, etc. The method of applying electricity is similar to the practice of Apostoli: After douching the vagina with an antiseptic solution, the intra-uterine electrode is introduced into the cavity of the uterus and passed up to the fundus. The positive cord is attached to this electrode, and the negative cord to the clay pad which is placed on the abdomen over the region of the uterus. The current is turned on very gradually in order to prevent any shock, the strength of the current not exceeding 30 milliamperes, and the seance lasting from three to five minutes. When the dysmenorrhœa arises from ovaritis, the treatment is begun a week before the expected time of menstruation and given daily for about eight minutes. The current is from a faradic battery and is employed as strong as can be borne without much pain. A flat, pliable electrode is placed over the inflamed ovary, and a similar one beneath the lumbar region as the patient lies on her back. After a few applications, the patient will usually be able to tolerate a ball-electrode, connected with the positive pole, placed against the ovary (the negative being on the abdomen), and a current of tension used three times a week. It is scarcely necessary to state that when dysmenorrhœa results from a chlorotic or nervous condition, the treatment by electricity is of secondary importance. The correction of flexions and the wearing of pessaries will also accomplish much for the relief of painful menstruation. Operative interference is required in certain cases—as in stenosis of the canal, polypi, vaginal stenosis or occlusion, imperforate hymen, and certain diseased states of the ovaries. The author asks for a trial of his method of treating ovarian dysmenorrhœa before consigning a patient so afflicted to the operating-table.—*Uni. Med. Mag.*

HELENINE IN LEUCORRHŒA.

Hamonic (*Rev. Obstét. et Gynéc.*, August, 1891) has had excellent results in the treatment of uncomplicated leucorrhœa from the internal administration of helenine. Raw helenine consists of a camphor, an anhydride, and a crystallizable principle — helenine proper. This principle acts powerfully when given internally in cases of acute or chronic gonorrhœa in the male, causing free discharge and increasing the pain without cutting the disease short. On the other hand, it seems to act specially on the glands of the uterine cervix. After a few doses it causes the uterine mucosa to become dry, and the glairy, viscous discharge of catarrhal endometritis disappears under the influence of the drug. Hamonic finds that helenine acts without the aid of any local treatment. It sometimes causes gastric disturbance and diarrhœa, but these complications are exceptional. He finds it best to give raw helenine as a pill, together with inulin, a white amylaceous matter also extracted from elecampane root. Inulin is, however, inert, and confection of roses or any similar vehicle will do as well. The following is the composition of the pill described by Hamonic: ℞ Raw helenine, inulin, aa 15 grains, with sugar of milk q. s., to be made into 100 pills; 2 to 4 to be taken in the twenty-four hours. Helenine is a failure as a local remedy, as it irritates the vaginal mucous membrane.—*Brit. Med. Jour.*

The Toad Poison has been found by Schultz (Nature) to be excreted by special glands in the skin, entirely distinct from the mucous glands, and which are confined to the back of the body, limbs and head. This poison acts as an anæsthetic.

PÆDIATRICS.

RESULTS OF REVACCINATION IN 464 CHILDREN.

Dubousquet and Jasewicz (*Bulletins et Memoirs de la Sociête de Medicine Pratique*, November 1, 1891) give the results of the revaccination of four hundred and sixty-four boys and girls in the public schools of St. Owen. Although one hundred and ninety-one of these had been vaccinated one year before, and most of them with success, yet the revaccination succeeded in 41.87 per cent. of cases. In 1890 an antiseptic wash was used before making the puncture; in 1891 no wash was used. There were no more accidents without it than with it. The highest percentage of success was among the youngest scholars. A large percentage of those who had been successfully vaccinated in 1890 were also successfully vaccinated in 1891. One girl of eight years had been successfully vaccinated in infancy, two years before had had smallpox, and was now revaccinated with success. The conclusions derived are: The necessity of vaccinating children of four to eight years of age, and at frequent intervals thereafter, and of general revaccination in time of epidemics.—*Univ. Med. Mag.*

HYSTERIA IN INFANTS AND CHILDREN UNDER TWO YEARS.

M. Ed. Chaumier, of Tours, read a paper on this subject at a recent meeting of the Académie de Médecine in Paris. He thinks that in very young children hysteria is often overlooked and mistaken for other things. Its symptoms vary according to the severity of the attack. When very slight, it takes the form of frequent causeless attacks of passionate screaming. In more marked cases, the limbs become more or less rigid and the face purple and congested, and sometimes these symptoms are accompanied or followed by tremor. When more severe, the child suddenly begins to cry, and loses consciousness completely: the body is usually stiff and the mouth wide open, but sometimes the body is flaccid. In some cases, these attacks come on in the middle of a fit of coughing, and they are then apt to be mistaken for false croup. He also describes a more aggravated form of the disease, in which the symptoms resemble those met with in adult cases. The child loses consciousness, and becomes quite rigid, with its eyes turned up, and the stiffened limbs may twitch or they may be thrown about wildly. In other cases, the body is quite flaccid and inert. Sometimes such attacks occur at short intervals; they are then often mistaken for meningitis. Hemiæsthesia and hyperæsthesia may exist, but they are almost impossible to make sure of; but contracture and paralysis cannot be overlooked, nor can the absence of the ocular and pharyngeal reflexes, which M. Chaumier has frequently observed. The prognosis is favorable. Recent investigations prove that hysteria is more easily cured in the infant than in the adult; and there is reason to believe that the earlier the treatment is begun, the more likely is it to be successful.—*La Semaine Médicale*, 2d December, 1891.

QUININE AS A REMEDY FOR WHOOPING-COUGH.

Ungar (*Deutsche medicinische Wochenschrift*, April 30, 1891) claims that quinine, although proposed as a remedy for pertussis by Binz in 1868, has not received the attention it merits in the treatment of this disease. From an experience of six years he believes that, after its administration for several days, the severity of the paroxysmal coughing lessens, and the frequency of vomiting and the number of attacks diminish. In some cases the intensity of the paroxysms is unaffected, but their frequency diminishes, and later they become less severe. The disease, however, takes a milder form, and in fourteen days from the commencement of the treatment there is only an occasional attack, or even none. A few cases of failure should not condemn the method, and he attributes unfavorable reports of its success principally to insufficient dosage. He prescribes, three times a day, as many decigrammes as the age counts years, for children up to 4 years of age, and with older children does not exceed a daily dose of 1.2 grammes, except in severe cases in robust children, when he sometimes increases the daily amount to 1.5 grammes for one or two days. To children under 2 years a proportionately larger dose is given, an infant of 3 months receiving 0.05 grammes at a dose, while a 6-months baby may be given 0.1 gramme. These doses are continued for five or six days, seldom as long as eight days. Correspondingly with improvement, the daily doses are decreased from three to two, and finally to one, usually given at night. In case the drug cannot be given in solution or capsule, the bimuriate may be employed hypodermatically.—*Univ. Med. Mag.*

TRANSFORMATION OF VIRUS.

Dr. Chauveau concludes a work on this subject, read at the Paris Academy of Medicine, as follows: 1. Vaccinal virus never gives variola to man. 2. Variola virus never gives vaccinia to the cow or horse. 3. Vaccinia is hence not attenuated variola and cannot be compared to benign anthrax infection communicated to animals by the inoculation of attenuated anthrax virus. 4. If vaccinia is derived from variola, it is by means of a radical transformation of the variola virus, up to the present time beyond the knowledge of experimenters. 5. The attenuation of virus is not an operation that can be identified with transformation.—*Gazette des Hôpitaux.*

BACTERIA IN DRINKING WATER.

Dr. W. Migula (*Centralbl. f. Bakt. und Parasitenk.*, Bb. VIII., No 12, p. 353) makes a contribution to our knowledge of this subject which is really a new departure as regards the examination of drinking water. He points out that, although considerable stress has been laid on the examination of water for pathogenic organisms, there is no reliable rule to guide the hygienist in his examinations for the ordinary saprophytic organisms and their relation to the purity of water to be used for drinking purposes. Dr. Migula washes out small flasks with bichloride of mercury; then, after rinsing them with the water to be examined, he leaves a specimen in the flask, which is plugged with sterilized cotton wadding and covered with an india-rubber cap. It is not necessary to pack the flasks in ice, as it is assumed that if any of the organisms multiply they will all do so, while if the putrefactive organisms (those that liquefy gelatine) grow more rapidly than the others, independent evidence is obtained of the impurity of the water. Cultivations are made in flat glass dishes in order to save the time required in manipulating plates and tubes during the cooling process. After examining 400 springs, wells, and streams, the author has come to the conclusion that where there are more than ten species in any sample of water, especially when these are not species ordinarily met with, the water should not be used for drinking purposes. He found that in only fifty-nine waters was this the case, but that 169 waters contained more than 1000 organisms per cubic centimetre, sixty-six of these having over 10,000 (forty over 50,000). From these figures it will be seen that some of the sources of supply would be condemned by the old method but would be passed by the new, and some condemned by the new would be passed by the old. Migula found in all twenty-eight species, and in a series of tables he brings out the fact that the number of colonies does not by any means correspond with the number of species, though in some cases it undoubtedly does so. This is, in fact, an exceedingly variable quantity. It also comes out that putrefactive bacteria are almost invariable absent from spring water; that they are most frequently found where the number of species is great, and where the number of colonies is between 1000 and 10,000 per cubic centimetre; that they also occur where the number of germs is below fifty per cubic centimetre, but very seldom where the number is over 10,000.

Dr. L. Schmelk, who recently (*Centralbl. f. Bakt. und Parasitenk.*, Bd. IV., No. 7, p. 195) pointed out there is a great increase in the number of bacteria in the water supply of Christiana during the period that the upland snows are melting most actively, now (*Centralbl. f. Bakt. und Parasitenk.*, Bd. VII., No. 4. p. 102) gives further evidence collected during the last three years in proof of his theory. The numbers he finds for those years were ten or fifteen per cubic centrimetre in March to 2500 in April, 1888; 1100 in 1889, and on March 28th, 1890, 5000; the breaking up of the winter snows having occurred this year much earlier than usual. This is the period during which the winter snows are melting, and after this is completed there is no marked increase in the number of bacteria in the lake water until the reappearance of the winter snows, some of the earlier falls of which during October, November, and December melt and disappear. In December the number of bacteria per cubic centimetre sometimes reaches 600, the highest point recorded during the year except in March. Dr. Schmelk thinks that the increase is due to the action of frost in breaking up the earth's surface, from which the contained organisms may be set free as soon as a thaw occurs and then washed away along with the surface soil, just as during great rain-storms. He also points out that the masses of ice projecting into a river may form "collecting" points for the particles suspended in the flowing water, as more bacteria are always found in the water obtained from such ice when melted than in the river water itself. He verified this by repeated experiments. He found, however, that when floating ice was melting in water, though it contained a few more organisms

than water collected near the surface, it held far fewer than water taken from a considerable depth. In the Christiana water-supply he found some thirty species of bacteria, some of which occurred very seldom, some at certain periods of the year only, and a few all the year round. The amount of solids in the water varies from time to time, between 0.92 and 0.94 grammes per litre, and traces of ammonia can usually be found in water during the time that it contains most bacteria.—*British Medical Journal.*

MEDICAL CHEMISTRY.

A NEW METHOD OF ESTIMATING UREA.

K. A. H. Moerner and John Sjögvist have divised a new method of estimating urea which is specially intended for use when accurate results are required.

The most commonly used method at the present time is that by means of hypobromite, and measuring the nitrogen given off, each cubic centimetre of which is reckoned as equivalent to 0.0027 gm. of urea. It is, of course, well known that this method is affected by errors, but the latter are not considered of sufficient importance to render this easy and rapid method unsuited for clinical use. In fact, it is not likely that the hypobromite method will readily be displaced by any other, unless absolute accuracy is required.

The two physiologists above mentioned, however, were in search of an *accurate* method, sufficiently easy and rapid to take the place of the elaborate methods heretofore necessary.

Among these is that of Bunsen, and this has long been regarded as one of the most exact on record. But it also suffers from some sources of error.

The general principle by which the authors operate is to determine the nitrogen of the urea separately from nitrogen derived from other sources. The method of execution is as follows:

Five cubic centimeters of the urine are mixed in a flask with 5 cc. of a saturated solution of barium chloride containing 5 per cent. of barium hydrate. Next, 100 cc. of a mixture of two parts by weight of 97-per-cent. alcohol and 1 part of ether are added, and the whole set aside, well stoppered, until the following day. The insoluble residue is then collected on a filter, and washed with enough of the ether-alcohol. If the filter pump is used, only about 50 cc. of the liquid will be required. Without the pump more liquid will be found necessary and the washing consumes more time. The filtrate is deprived of ether and alcohol by distilling at a temperature which should under no circumstances exceed 60° C. This is best accomplished by connecting the receiver with the filter pump. If no filter pump is available, it is usually preferable to evaporate the ether and alcohol on a water bath, since it is easy here to adjust the temperature below 60° C., while this may be exceeded during ordinary distillation.

When the residue measures above 25 cc., a little water and calcined magnesia are added, and evaporation continued until the vapors no longer show an alkaline reaction (from escaping ammonia). This is usually the case before the liquid has been concentrated to about 10 cc. (The addition of calcined magnesia, above directed, is absolutely necessary if there is any considerable amount of ammonia present.) The concentrated residue is transferred into a flask, water being used to wash the capsule, then mixed with a few drops of sulphuric acid and evaporated on the water bath.

The residue in the flask now contains no other nitrogenized substance besides urea. This is determined by Kjeldahl's method, viz., heating with strong sulphuric acid until the nitrogen compound is entirely decomposed, sulphate of ammonia being formed; this is then decomposed by soda, the ammonia caught in standard acid, and from its quantity the amount of the nitrogen compound calculated.

Accordingly, 20 cc. of pure, concentrated sulphuric acid are added to the contents of the flask, and the latter heated over a naked flame until the liquid has become colorless. Pure soda (free from ammonia, the absence of which in all ingredients must be assured) is now added, and the escaping ammonia caught in a measured quantity of volumetric sulphuric acid. The excess of the latter, left unsaturated, is afterwards titrated back by baryta [standard soda would seem to us preferable, as this will not cause a precipitate], litmus being used as an indicator.

The authors tested the method upon pure urea. By Kjeldahl's method this yielded, as a mean of 5 determinations, 46.801 per cent. of nitrogen, theory required 46.74 per cent. —From *Skand. Arch. f. Physiologie* (by F. Holmgren), 8vo. Leipsig, 1891.

Displacement of the uterus is almost the sole cause of the vomiting of pregnancy.

NEWS AND MISCELLANY.

A PRESCRIPTION.

My pallid friend, is your pulse beating low?
Does the red wine of life too sluggishly flow?
Set it spinning through every tingling vein
By out-door work, till you feel once again
Like giving a cheery school-boy shout;
Get out!

Are you morbid, and, like the owl in the tree,
Do you gloomily hoot at what you can't see?
Perhaps, now, instead of being so wise,
You are only looking through jaundiced eyes;
Perhaps you are bilious, or getting too stout;
Get out!

Out in the air where fresh breezes blow
Away all the cobwebs that sometimes grow
In the brains of those who turn from the light
To all gloomy thoughts instead of the bright
Contend with such foes, and put them to rout;
Get out!

FOR BETTER TREATMENT OF CRIPPLES.

AN APPEAL FOR AN ORTHOPÆDIC DEPARTMENT AT THE PHILADELPHIA HOSPITAL.

At a meeting of the Bureau of Charities and Corrections a communication was received from H. Augustus Wilson, M. D., relative to the establishment of an orthopædic department at the Philadelphia Hospital. In his letter Dr. Wilson says that his attention has been called by medical officers, nurses and medical students connected with and attendants at the clinics of the Philadelphia Hospital, to the absence of that prolonged attention to cripples which modern surgical practice has established as necessary, not alone for the correction, but as well for the prevention of deformity. The short terms of duty of the attending surgeons, he says, and the scattering through the many departments of these cases of cripples is not conducive to their best interests, and necessarily the prevention of deformity is often ignored. The trained nurses that are graduated from this almost perfect training school are deficient in knowledge of matters pertaining to orthopædic surgery, he says, and are obliged to seek elsewhere the opportunity of learning.

The vast number of cases appropriate to such a department, Dr. Wilson continues, are not now systematically used for the instruction of medical students and physicians in the application of surgical, mechanical, gymnastic manipulatives, and therapeutic measures, devoted primarily to the prevention of deformity and correction of deformities already formed. In conclusion, he urged the appointment of one or two orthopædic surgeons to have continuous charge of such an orthopædic department.

The matter was referred to the Medical Board, who were requested to hold a meeting and consider the question of organizing such a department. Should it be determined to organize this department, the Medical Board will advise the Bureau of Charities and Corrections as to the manner of organization.

R. F. Longacre was elected a district physician to succeed Dr. H. B. Martin resigned, and Joseph S. Phifer was appointed messenger at the office of the Bureau of Charities and Corrections.

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That while there's life, there's always soap.
—*Pharmaceutical Era.*

A NEW coffee adulterant, since the artificial beans have been made quite impossible, consists in roasted coffee beans treated with water for its extractive, which have been roasted a second time after dipping into a sugar solution. The latter re-imparts color and gloss.

THE TEMPERATURE OF DRINKS.

A writer in a German paper gives the following as the proper temperatures for different sorts of beverages: Water, 54°; seltzer water and beer, 57° to 60°; red wine, 62° to 66°; white wine, 60°; champagne, 46° to 50°; coffee, 73° to 79°; beef-tea, 100° to 125°; milk, 60° to 64°; hot milk, 93° to 95°.

ONE of our well-known Philadelphia pharmacists has recently received the following written orders for medicine:—

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1 Doz. 2 oz. Quinine pills.

1 Bottle Honeatta water.

A. Boo Gee.

1 box of Brandteth's pills, sugar quoted.

Please send enough appecac to throw up a four months old baby.

Two five grain blue mask pills.

10 cents worth partisapated chalk.

To these we will add, from our personal knowledge, the fact of a colored girl always asking for *constipated* lye, when sent for the concentrated article.—*Coll. Clin. Rec.*

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THE
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CLINICAL LECTURE.

A CASE OF INTERMITTENT CLAUDICATION, OR LIMPING, DUE TO AN ARTERIAL OBLITERATION OF SYPHILITIC ORIGIN.*

By PROFESSOR CHARCOT.
PARIS, FRANCE.

Gentlemen:—I will show you to-day a very characteristic example of an affection which I observed and described in man about 30 years ago.† I have reference to intermittent limping due to arterial obliteration, which can also be called intermittent ischæmic painful paralysis, or still, an intermittent painful paralysis due to an intermittent or functional ischæmia of the extremity. These different names are given by reason of the principal clinical characters manifested. When I speak of intermittent limping, for the sake of brevity, I have reference to the particular variety of the disease which I have described.

I cannot better impress upon your minds this symptom, or rather this especial syndrome, than by making the patient walk before you for an instant. She is a woman 52 years of age, a seamstress by occupation, who recently entered my service.

Sitting, or lying in bed, she does not exhibit any motor disturbances, she can freely move her limbs and feet, but when she is made to walk the characteristic signs appear. Otherwise, there is nothing abnormal. In about two minutes there appears upon the hand a sharp, shooting pain, alighting then upon the calf of the left leg and afterwards upon that of the right one, invading, finally, the instep of both legs. In the mean time the inferior extremities become benumbed, walking is more and more difficult, and the patient at last is forced, by the progressive weakness and the increasing pain, to stop and sit down. Is the train of symptoms completed? Not at all; I have yet to add a new feature which is wanting in the case before us: It is a muscular contraction, a painful cramp which stiffens the extremity attacked and hinders even voluntary movement. Without doubt, this latter phenomenon could be demonstrated in our patient if it were not for the pain that is elicited.

The symptoms developed in the paroxysm soon diminish in severity owing to the influence of rest. The contraction and the pain disappear, and motor-power is re-established. In a short time the patient can resume his walking. Again, however, the phenomena reappear, these coming on after the same lapse of time more or less, about an hour, and hence the justifiability of the term *intermittent limping.*

This patient has been suffering from the disease for the last nine months. At the beginning, 20 minutes or half an hour after walking she would begin to experience the characteristic pain; this became progressively worse until it has reached the present state.

Intermittent claudication is not a disease peculiar to man. Although I have studied it in human beings, it has been observed by veterinary physicians; and I have but to apply to the disease in man the facts furnished by the same malady observed in the lower animals. Bouley in France and Hertwig in Germany have particularly endeavored to demonstrate the existence in the horse of claudication due to arterial obliteration. Here the train of symptoms is always the same, and perhaps these are more marked. The horse trots as if nothing were the matter with him; in about quarter of an hour the animal shows more or less signs of fatigue, his gait being especially weak posteriorly; a stroke of the whip livens the

* A Clinical Lecture delivered at the Hospice de la Salpêtrière, and published in *Le Bulletin Medicale.*

† Charcot — *Comptes-rendus de la Soc. de Biologie,* 1858, et *Leçons sur les maladies du système nerveux,* 1886, t. V *des œuvres complètes.*

beast's pace, but soon afterwards the animal appears to suffer more and more, his hind legs become stiff, and he finally falls. After a little while, the animal recovers, begins anew his work, but before he has gone very far is again attacked by the same symptoms.

The cause of these phenomena is well known: It is the obliteration or the contraction of the arteries supplying the extremity or extremities attacked. In the horse it is the abdominal aorta that is most frequently the seat of the vascular lesion. In the first instance, in which I have been able to obtain a good history, it started in an arterio-venous aneurism of the common iliac; but in man the lesion most frequently starts in an arterial stenosis due to a sclerotic condition of the vessel-walls. Thus, in a case to which I have often referred, in which the appearance of gangrene made amputation of the member affected a necessary procedure, it was found that in the extremity cut off the arteries were in a condition of extreme contraction, scarcely permeable.

I will point out to you in a few words (for further details you can consult my previous works) the pathological phenomena. Collaterally and through the very minute vessels, the extremity involved receives a very limited amount of blood, but sufficient to maintain the vitality of the tissues. Such a quantity of blood, however, is not sufficient to keep up the functions of the corresponding parts, because activity of the muscles implies, so to speak, an excess of work, and therefore, the need of a larger amount of nutritive material.

The same conditions may be produced by experimentation. Placing a temporary ligature at the inferior portion of the abdominal aorta gives rise to anæmia of the lower extremities; the animal exhibits pain; and the muscles deprived of blood become rigid. Taking off the ligature, by which the circulation is re-established, a return of the organs implicated to the normal state is brought about. If the ligature is allowed to remain the lesions will become permanent. This is precisely what happens in the phenomenon of cadaveric rigidity, or in a local mortification which is the prelude of a coming gangrene. Are the results of these experiments instituted by Stenson and Brown-Sequard the same as those occurring in the subject suffering from intermittent limping? Not entirely so. Similar phenomena occur in operated animals, but the symptoms artificially produced by the suppression of the circulation do not disappear spontaneously as they do by simple rest in those cases that come under our observation. We can, however, *mutatis mutandis*, more or less apply to the case of man the phenomena produced by experimental pathology.

We must admit that the arterial lesions producing the symptoms of intermittent claudication, like those seen in an extremity, may, in any other organ, determine at least analogous phenomena. This prevision is realized in many organs in which, according to their function, are produced symptoms similar to intermittent claudication. Thus in affections of the heart, in angina pectoris, the lesions are found in the coronary arteries, at least in the majority of cases. Cerebral vertigo, according to Professor Grasset, is due to arterial sclerosis. Such is the case also in reference to the same organ, in which, according to the excellent studies of Berlin, a lesion of a certain area of the cerebral cortex produces that curious phenomenon known under the name of *dyslexia*. You know what is meant by dyslexia. A person begins to read, everything appears to be all right, but after a certain time it becomes impossible for the reader to continue, and, without knowing what the matter is, is obliged finally to stop. After a little while, the reading is continued, to be followed by the same train of phenomena, and these interruptions go on until, if the reading is persisted in, a true intermittent cerebral halt, as it were, is produced. Pick,* arguing from the evident clinical analogies which exist between dyslexia and the phenomena which we have been studying, and based also upon anatomo-pathological analogies, comes to the probable correct conclusion that there is an identity in the pathogenic process. Considered in its widest sense, this syndrome, intermittent claudication, which by itself forms a most important chapter in pathological physiology, comprises a number of different facts from a clinical point of view, but, nevertheless, recognizes the same mechanism. Thus in a subject suffering from generalized arterial sclerosis, various organs may, simultaneously or successively, exhibit the same train of symptoms, all being the outcome of a common process. I was one day consulted about a case of intermittent limping, perfectly characterized, but, nevertheless, unrecognized up to that time. The condition having been ascribed to rheumatism, electricity was proposed. The beginning of the affection could be traced as far back as three months, and yet these signs,

*Pick—Zur Lehre der Dyslexie.—*Neurologische Centralblatt*, March 1, 1891, No. 5, p. 130.

signs to which we will refer hereafter, announced the coming on of gangrene. Prolonged rest was advised on account of these phenomena, and the limping ceased. In this patient arterial sclerosis was revealed by the sudden blindness of one eye, the cause of which Galezowiski attributed to a thrombosis of the central artery of the retina. It is to another feature of the case which I desire to call your attention. In the patient, suffering from limping of the extremities, there was developed, at a certain period, an analogous affection of the heart, and he finally succumbed to an attack of angina pectoris. Vizzioli has observed, in a diabetic case, a similar succession of phenomena.

After these precursory remarks about the general pathology, let us consider intermittent claudication proper. The syndrome which constitutes the disease is, as I have already told you, a special one. Nevertheless, the same changes or symptoms may be produced, from one point of view, by certain intermittent paralyses of the inferior extremities. Such happened, for instance, in the case of a soldier, 30 years of age, who came to consult me a few days ago. About a year previously he had received a contusion on the foot. After a short time he could, without trouble, undertake to march at an ordinary pace, but if he was obliged to accelerate his walking, he would experience in the course of from 20 minutes to half an hour, a certain weakness of his right inferior extremity and a vague sensation of swelling of the leg, but without a true pain. He would be obliged to stop, rest a little while, and on resuming his march the same train of symptoms would re-appear, and so on indefinitely. We made him walk and examined him very carefully. After from 10 to 15 minutes' exercise, the right inferior extremity, without any sign of real limping, exhibited a peculiar awkwardness; in about from 20 to 30 minutes the trouble attained its height in intensity, and the patient was obliged to take a rest. We explored the right inferior extremity but we found no change of color or temperature; neither did we find any modification in the beating of the pedal or the posterior tibial arteries; the pulse was accelerated, its rate being 112 per minute; finally, there was no pain on pressure over the muscles or over the region of the nerves. During the period of rest the patellar reflexes were markedly exaggerated, especially on the right side; the epileptoid trepidation of the foot could be elicited easily, but only on the right side. These symptoms were somewhat more pronounced after walking. I will add that the patient is free from all cardiac or vascular diseases, and has never suffered from syphilis. He is subject not to an hysteric but to a neurasthenic neuropathy. You have noticed the difference which exists between these phenomena and those which you have already studied. The absence of all circulatory disturbances in the same affected member is sufficient to assure us that, in this case, intermittent limping is not of arterial origin. I dare not say what the true nature of these symptoms is without a more ample information. I am led to believe in a peculiar debility of the nerve-centres, in a rapid exhaustion of them, this being the outcome of continuous activity.

Ischaemic intermittent claudication is due to an endoarteritis which in itself is a permanent and, to a great extent, progressive lesion. In such a condition there is great lack of blood-supply to the muscles when in activity. This being the case, what will be the result if a further diminution in the blood-supply continues? Nutrition, in its turn, will suffer a serious and definite damage; and the disturbances of function will be followed by disturbances of structure. In a word, the danger of sphacelus or gangrene is most imminent. Our patient is on the verge of being attacked by this serious condition. Let us examine her inferior extremities. On the right one the toes and the forefoot, and on the left one the toes alone, exhibit a reddish coloration which is the prelude of gangrene. In both members the arterial throbbing so plainly felt on the level of the femoral artery is absolutely imperceptible in the pedal, posterior and popliteal arteries. If you interrogate the patient she will tell you that she experiences in both feet, at night, shooting pains that interfere with her sleep, a phenomenon which belongs to the initial symptoms of gangrene of the extremities.

Bear this in mind and you will learn that intermittent claudication may take place during the prodromes of gangrene; this is not always the case, but when this symptom appears you must be on your guard, remembering that its appearance leads to a very significant prognosis. These facts are but little known, and they claim a chapter in the classical description of gangrene and its precursory symptoms. Here lies the origin of the mistakes that are frequently made. A patient came to me suffering from gangrene of both feet. After two months he complained of symptoms pertaining to intermittent claudication; in the mean time he had consulted many able physicians. He was told that he was suffering from rheuma-

tism and neuralgia, and was treated with electricity and various topical applications. The disease continued to develop until gangrene set in. It was found necessary to practise amputation, and the operation was performed by my colleague, Terrillon, Surgeon of this Hospice, who has reported the case to the *Société de Chirurgie.*

Are there any chances, by means of a treatment applied in due time, of preventing, in a similar case, the development of such conditions? Yes, most assuredly; we hope to succeed by them, and it is our duty to attempt to do so. It remains for us to decide upon the course of treatment under which we shall place our patient. The affection depends upon, or is caused by, an endoarteritis. But there are endoarterites of various natures; perhaps we may recognize for the disease a special etiology which may, in turn, render it amenable to a particular medication. At all events, it is important not to neglect to make an inquiry into this matter, and I have already examined this side of the problem.

Our patient is not addicted to the alcoholic habit; on the contrary, she is somewhat arthritic. An important fact is that she has arrived at an age when chronic arteritis ceases to be rare. Atheroma, or "the rust of life," as Bichat poetically calls it, may be considered as one of the attributes of senility. "One has the age of the arteries," the well-known aphorism of Cazalis, conveys the same idea. It is true that there are old people wholly exempt from this lesion; thus I have found at an autopsy of a centenarian, performed in this hospital, the total absence of any alteration in the walls of the blood-vessels. This is, however, the exception. According to Bichat, out of ten persons that have passed the age of 60, seven have atheroma. Our patient is not very far from this age. We must, however, examine other hypotheses.

The infectious diseases, notably typhoid fever, do not claim our attention. This cause is wanting in the present case.

In examining a patient suffering from intermittent claudication, we must always think about the possibility of the existence of diabetes. In 1861 I studied one of the complications of this malady, sphacelus, or gangrene, which sometimes associated itself with phlegmons or anthrax of a serious character, attacking, at the very start, the whole of one extremity. This diabetic gangrene of a member is the outcome, in my opinion, of an arteritis, and the cases of Potain, of Benni, similar in nature to mine, support my views. It may be conceived that the same lesion may produce intermittent claudication. I have recorded two cases, and recently Vizioli* has published three more. One of Vizioli's patients died from angina pectoris. According to Ferraro, diabetes may give rise to a special variety of arteritis, characterized by lesions of hyperplastic endoarteritis with tendency to produce marked constriction of the blood-vessels. Our patient, however, has no glycosuria; therefore, we shall no longer dwell upon this point.

Syphilis is one of the causes that ultimately exercise a deleterious influence upon the walls of the blood-vessels. Lancereaux, Virchow, and Clifford Albutt have called attention to its influence in the development of arteritis; but it is Heubner† who has especially studied the true characters of syphilic arteritis. The process begins on the internal membrane (contrary to the opinion of Baumgarten who ascribes the lesion to a gummatous peri-arteritis), followed by the formation of gummatous nodules, etc. We must bear in mind the relative precocity of this variety of arteritis which makes its appearance earlier than the common arterial sclerosis, and the absence of fatty or calcareous degeneration which makes a cure possible.

Do not forget that our patient is suffering from arteritis of the inferior extremities. We have asked ourselves whether arterial syphilis can attack such a seat. As has been recognized by Lancereaux and confirmed by Heubner, it is in the arteries of the brain where the disease finally localizes itself. It has, nevertheless, been observed in other regions, such as the vessels of the intestines (Heubner), in the coronary arteries (Ehrlich), and in the pulmonary artery (Wagner). Prout has pointed out the existence of syphilis in the peripheral arteries, though during his time syphilitic arteritis was not well known. A localized gangrene of the extremities has been observed during a course of syphilis; such is the case reported by Podres. On the whole, we cannot oppose the idea that the malady in question may be determined by syphilis; and it would not be illogical to make such an assertion in the present instance. It all depends upon whether we have sufficient reasons to believe in the presence of the infectious taint in this case. We have, I think, very

* Vizioli:—La Claudicazioni intermittente come mezzo diagnostico nei casi di diabete decipiens. *Commun. a l'Academ. med. chir. de Naples*, Naples, 1891.

†Heubner:—Die luetische Erkrankung der Hirnarterien, Leipzig, 1874.

clear and convincing reasons, and these are furnished us by sufficiently characteristic evidences.

The patient suffered at about the age of 15 from articular pains which lasted for 18 months. Of late she has been subjected to attacks of migraine, accompanied with vomiting. These phenomena pertain to arthritism and point to the presence of syphilis.

In 1860, at the age of 24, there appeared upon the dorsal face of the feet a painful tumefaction which disappeared after a certain time, leaving as a vestige a small exostosis which still exists. Did she have, then, osseous gummata? Such is possible, but what follows is still more typical. Ten years later, at the age of 34, she suffered from a tenacious coryza, a rebellious sore throat, necrosis with the expulsion of the nasal bones; and thus you see her nose is deformed and flat. There is a small perforation of the soft palate, with irregular borders, a lesion which probably dates from that time. Five years elapsed.

In 1875 gummata developed in the region of the shoulder; a focus larger than the rest empties into a fistulous canal which gives passage to mortified fragments of tissue. Small cicatrices seen around the region are the present vestiges left by the application of the cautery as a therapeutic measure. The shoulder articulation is perfectly healthy. This is not all. From November, 1890, to January, 1891, that is, during a period of 3 whole months, the patient suffered day and night with an intense cephalalgia and consequent insomnia. She was given iodide of potassium during the last six weeks of this period, and the pains gradually decreased. In January, 1891, the first symptoms of rachitis made their appearance; these afterwards diminished, but did not disappear entirely. There was found at the superior portion of the dorsal region of the vertebral column an abnormal, hard protuberance, formed by a transverse and antero-posterior thickening of the spinal ridge. It was probably a developed syphilitic Pott's disease. At the same time symptoms of partial epilepsy were noticed, the aura beginning at the left superior extremity, extending to the leg of the same side, accompanied with sensations of vertigo, followed by transitory paralyses of the affected members. The various symptoms which I have described were, on the whole, combated by iodide of potassium and mercury. Their syphilitic nature did not escape the notice of the attending physicians. Immediately after the cephalalgia, intermittent claudication appeared for the first time.

I will summarise. Here is a history of a serious tertiary syphilis which has given rise to the development of the present conditions. We have no reason to deny the power of syphilis to produce in the extremities a specific arteritis. The part played by syphilis in the present case is sufficiently clear, and thus we must direct our treatment accordingly. What risks would we be apt to run, after all? If our hypothesis is false, no harm will follow; if it is exact, the chances are that our interference will be productive of the best results. To conclude, then:

1st. We must order, as is our duty to do in all cases of intermittent claudication of arterial origin, a prolonged rest. Strictly speaking, it is not absolutely necessary to require patients to rest wholly in bed; it is only essential that we prevent in some way the appearance of the symptoms of the disease in question. This means, patiently employed, may bring about the complete cessation of such symptoms.

2d. To diminish the pains which are particularly torturing at night we must have recourse to the use of opium. Rest will suffice sometimes to allay them.

3d. Finally, we must push the iodide of potassium, administering it in large doses, and employ at the same time mercurial frictions.

Can we succeed in checking the progress of the disease, and make it recede at the same time? It is hoped that such will take place, At all events, we shall have our conscience clear by having tried to prevent the progress of the disease, and of having combated the abnormal conditions by means of rational therapeutics.

PLASTER OF PARIS FORMULA.

1. *To Make Plaster Set Hard.*—Mix best plaster of Paris with about 10 per cent. (more or less, according to effect ascertained by preliminary experiment) of very finely powdered marble (calcium carbonate). Or add to it about 6 per cent. of powdered alum, or about the same amount of ammonium chloride, before mixing with water.

2. *To Make Plaster Set Slower.*—Mix it with 2 to 4 per cent. of powdered althæa root before adding the water. This not only retards the hardening of the plaster, but also enables it to be cut, filed, sawed and turned.

An addition of 8 per cent. of althæa powder retards the complete setting of the plaster for about one hour, so that the mass can be used for any purpose where it is to remain plastic during at least a portion of that time.—*Amer. Drug.*

COMMUNICATIONS.

REMARKABLE COLLECTION OF FOREIGN BODIES IN THE STOMACH.*

By JOSEPH D. CRAIG, A. M., M. D.
LECTURER ON AND DEMONSTRATOR OF ANATOMY IN THE ALBANY MEDICAL COLLEGE.

The following abstract of a case in which a remarkable collection of foreign bodies was found, *post mortem*, in the stomach, is worthy of record, both on account of the unusual number and character of the substances obtained.

The history of the case is as follows: Emma F., aged 24, was admitted to a hospital for the insane, Nov. 24, 1890. She was a servant by occupation, a native of Sweden, had been in the United States three years and was unmarried. Up to the time of her commitment the records state that both her parents were dead, and that she first became insane in March, 1889, that she was non-pregnant, and that the supposed cause of her insanity was delayed menstruation. After ten months' continuous custody in a County House, she was discharged in April, 1890, and was afterwards employed as a domestic for seven months. During these seven months the patient showed evidences of returning insanity, and she was finally taken to a State Hospital in November, 1890.

"On admission," says the hospital record, "patient took but little interest in her surroundings, was confused, childlike and incapable of giving a reliable account of herself; in fact, during her entire residence in the hospital, it was almost impossible to engage her in conversation, and when she was disposed to talk, she used such broken English and was so incoherent as to make it extremely difficult to follow her. Her general health was apparently fair, and she weighed 150 pounds. In the latter part of December, she began to fail and complained somewhat of colicky pains in her abdomen and had some diarrhœa and vomiting. Under treatment these symptoms subsided and she was able to occupy herself with light work about the ward until March, 1891, (about two months before she died) when she again complained of pain in the stomach, and vomited. About this time she had three profuse hæmorrhages from the bowels, which were very dark in color and attended with considerable griping. A careful examination of the abdomen was made and no evidence of a malignant growth was found. Several examinations of the chest had been made previously and there had been discovered some evidences of consolidation of the apices of the lungs. At this time another examination was made and the consolidation on the right side had increased. From now on she failed rapidly, became much emaciated, had night sweats, and coughed and expectorated a great deal. She did not, however, have any further stomach or intestinal disturbance until the 20th of April, when she again complained of pain. She had frequent attacks of vomiting, but did not eject anything resembling blood.

On May 23, she had two hæmorrhages from the lungs, and also some bleeding from the nose. She took nourishment fairly well and appeared to be free from any distress.

On the 25th of the same month, she was again troubled with vomiting, but had no pain with it. It was necessary to catheterize her for retention of urine. The vomiting subsided in the course of 24 hours and she had no further attack.

She died on the 29th of May, having successfully concealed from her attendants the fact that she had swallowed any foreign substance. The cause of the hæmorrhages and of the bloody stools and of the vomiting in March, two months previous to her death, was also unascertained during her life.

The body of this woman being unclaimed was duly received at the Albany Medical College early in June, was embalmed and preserved for dissection. On November 30, dissection was begun and about two weeks later the following articles, 120 in number, were found collected together partly at the pyloric end of the stomach and partly in the ascending portion of the duodenum.

1. Fifty-one pins.
2. Sixteen needles, (whole or part).
3. Three darning needles.
4. Thirty-two nails varying in length from a half inch to three inches.
5. Two screws, one of them $2\frac{1}{2}$ inches long.
6. Three pieces of iron, $3\frac{1}{2} \times \frac{1}{4}$ inch.
7. Two rolls of hair.
8. Two pieces of wood.
9. Three pieces of cloth, each 5×1 inch.
10. Six hair pins.

The metal pieces were very much corroded and some of the pins and hair pins were bent. The rolls of hair and pieces of cloth were not preserved on account of their very offensive odor and from the fact that they presented nothing of unusual interest.

* Read before the Medical Society of the County of Albany, February 10, 1892.

The pieces of cloth were evidently torn from the calico dress and underclothing of the patient. It is to be regretted that, owing to the advanced state of decomposition of the body, other portions of it, particularly the lungs, could not be satisfactorily examined.

Patients are occasionally found among the insane and hysterical who swallow various foreign substances, but it is unusual for them to introduce into their bodies so great a variety and so large a number of articles as were found in this case. There seems also to be a desire on the part of such people to conceal, not only the fact, but also the manner of the introduction of extraneous bodies, and even when the evidence is conclusive of the actual presence of needles or pins in the tissues, they will deny any knowledge of the way in which they were introduced. This concealment is not due to any sense of regret or chagrin or shame but from an obstinate insane determination, and seems to give them satisfaction and pleasure to prevent the attendants from obtaining positive information. It is also quite clear that these substances are not used with suicidal intent, but that, with the loss or perversion of the reasoning powers, there is an inability to properly estimate the consequences of such an act. These cases also occur most frequently among women, and among women whose insanity is due to some perversion of the menstrual function.

In order that this case may present greater interest, I have grouped with it three others which are noteworthy from the large number of substances found. The brief histories of these cases are as follows:

The first case is taken from the records of one of the State hospitals for the insane. This patient was also a woman from whose neck and abdomen were removed eleven hair pins, nineteen pins and one needle. Nothing could be ascertained in regard to the manner in which these substances were introduced into her body as she could not be induced to make any statement regarding them.

The second case was reported by Dr. Judson B. Andrews in the *American Journal of Insanity* for July, 1872. A very brief abstract is here presented. This patient was also a woman, 30 years of age, a seamstress, single, with no hereditary tendency to insanity, was of a highly nervous and excitable organization, emotional and irregular in feeling. She suffered at various periods from severe pains in the head, and with delirium at menstrual periods. Had also at various times attacks of acute rheumatism, and diphtheria, and, finally, peritonitis, from all of which she recovered. To quiet the pain and distress of these diseases she took morphine hypodermically, becoming at last addicted to the drug and using about a dram and a half per week.

Just before her admittance to the asylum, she purchased ten papers of needles, only two of which could be accounted for except as they were removed from various parts of the body. When first brought to the asylum, she was maniacal. These maniacal symptoms gradually subsided and menstruation, suppressed for two years, began again with scanty flow, much pain, and delirium. Three months after her admittance a broken needle was extracted from her right breast, which was inflamed and extremely sensitive. From this time to her death after seven months' confinement in the asylum needles were removed from her left breast, the abdominal parietes, the mons veneris, labia and vagina. Some were removed from the thighs and legs down to the ankle, from the buttocks, from about the arms and from the back as high as the shoulders. As many as twelve needles were extracted in a single day. This woman, like the other two, repeatedly and persistently denied any knowledge of having introduced them either by the stomach or skin. A strict watch was kept of the patient at all times. She must have introduced the needles before reaching the asylum, and as they were all of them rusted, must have been in the body for some time. Their presence produced little local irritation and did not produce a fatal result.

Two hundred and eighty-six needles were taken from the body during life, three were passed from the rectum during sickness, and eleven were taken from the tissues after death. Of the number, 300 in all, 246 were whole and 54 parts of needles. Of the 300, 170 were found in the breasts, 60 in the abdominal wall, 20 in the genitals, 30 in the thighs and legs, and 20 in the back.

The third case was reported by Dr. Bastian, of London, at a meeting of the Clinical Society of London, held on December 14, 1891. The brief history is as follows: Eighty-six needles and one pin were removed from a body of a woman, an inmate at that time of the work-house at Guisborough, England. Fourteen needles were still to be felt in different parts of the body, and some the needles extracted were from $3\frac{1}{2}$ to $3\frac{3}{4}$ inches in length. The patient was fifty-five years of age, and had suffered from epilepsy from childhood. This woman was fairly intelligent, had occasional fits of bad temper, at which times she refused food. She

had no morbid appetites, was accustomed to much sewing, and often had packages of needles in her possession. The needles had all been extracted by the doctor, the nurse, or the matron, or by the patient in the presence of one of the three. They had also, with one exception, been extracted from the hypochondriac, lumbar and iliac regions, or from the buttock or thigh of the left side, on which side there was some blunting of sensibility. Like the other cases, this patient would not make any definite statement as to how the needles were introduced, neither did their presence give rise to anything more than irritation and tenderness when they were approaching the skin and were about to emerge.

To sum up these four cases, in conclusion, it is found that they present the following characteristics in common:

1. The large number of bodies found.
2. Their presence in each case in a woman.
3. The persistent refusal of each to give any information as to what manner the bodies were introduced or that they were introduced at all.
4. The length of time these foreign substances, particularly the needles, remained in the body without giving rise to dangerous complications.

SOME CONTRA-INDICATIONS FOR THE USE OF OPIATES.*

By MARIE B. WERNER, M.D.,
PHILADELPHIA.

My object in presenting this subject before the Society to-night is that I wish to show that in general practice the indications are limited for the use of opiates. We must fully realize that we have a broader basis for medical science than symptomatology, in order to give our patient the full benefit of our knowledge. Our position being at all times one of trust, we must endeavor, in helping our patient, to find the cause and remove it, rather than hide the symptoms it gives rise to by an opiate. Aside from the possible mental disturbances such a course of treatment might induce, it often materially complicates surgical efforts to relieve patients, the results of which we have repeatedly heard discussed at these meetings.

In order to discuss this drug with due fairness, it will be necessary to give a few moments to the consideration of its pysiological action on the human economy. Dr. H. C. Wood, in his *Treatise on Therapeutics*, says: "When opium is taken in such a dose as to produce its mildest physiological effects, it exerts a quieting influence, inducing a peculiar dreamy condition; after a length of time, varying according to the idiosyncrasies of the patient and the dose of the drug, this condition passes into sleep, either light, dreamful, natural, or heavy, and deepening into stupor. On awakening, the patient may return at once to his normal condition; but very often he experience a state of depression, shown by languor, a little headache, nausea, or even vomiting, which may last for some hour. One of the most common of these departures from the ordinary course of symptoms is an excessive depression following the sleep produced by moderate doses of the medicine. This state is seen, as far as my experience goes, most usually in females of weak, nervous organization such as are peculiarly liable to attacks of neuralgia. The symptoms are a feeling of weakness and prostration, often accompanied by chilliness, a dull headache, and giddiness, but especially marked by nausea and frequent vomiting."

Bartholow states that, as a rule, opium does harm in all gastro-intestinal maladies in which there is a deficiency in the proper secretion, or a suspension of the functions of the liver and kidneys.

Dr. J. B. Mattison, in his valuable paper before this Society in October, 1890, entitled "The Renal Status of Opium Habitués," after a careful analysis, arrived at the following conclusions: First, the habitual use of opium in any form will cause organic renal disease; second, the changes most likely to be met with are cirrhotic; third, that the rationale is threefold—vasomotor changes, impaired general nutrition, and inflammatory action due to non-eliminated irritant products. I would further call attention to the valuable contributions of Dr. A. Haig, published in the *British Medical Journal*, 1890, in his studies on the influence of opium and morphine on uric acid; also, of the retention of this latter product in the human economy, and its relation to the causes of disease. His observations and experiments proved to him that the administration of opium or morphine caused retention of uric acid, accompanied by a reduction of arterial tension; that, when the effect passes off, there is a rebound, with an excessive excretion of uric acid and marked high tension, often accompanied by headache and mental depression.

* Read before the Philadelphia County Medical Society, January 27th, 1892.

Let us look carefully into these statements and compare them with our practical experience; we find that, after lulling pain and induction of sleep, we come to a period of depression, even after a moderate dose of the drug. The depression is usually followed by a certain loss of resistance to bear any renewal of pain, and, in consequence, it becomes necessary to repeat the use of the drug; indeed, when we study carefully its action on a previously weak, nervous organization, we find the description given by Dr. Wood very ably describes the case for us. He tells us: "The symptoms are a feeling of weakness, prostration, chilliness, dull headache, nauseau, etc." In the face of this the questions must certainly present themselves to us: Is it wise to simply gratify the desire of the patient? Would it not be better to study the cause and remove it rather than hide the symptoms which lead us to the origin of the trouble? I refer to cases in everyday practice; cases in which a periodical monthly pain is lulled to sleep by several doses of morphine or opium, while the proper cause is entirely left out of sight. There is no doubt in my mind that cases have come to all of us where a case of chronic constipation or continuous indigestion, combined with a nervous, irritable temperament, perhaps, added to that, or independent of this, an unpleasant skin eruption, etc., claimed our attention.

Quite often a question regarding any menstrual difficulties shows that there is some pain, often varying in severity, and the next question, What do you do for the pain? will elicit the answer: Oh! I take a little paregoric, or I have some pills or suppositories I use, perhaps previously given to some member of the family for pain. Not infrequently an investigation will show that the main ingredient is an opiate.

In our day of progressive medical science it becomes necessary that we should join hands and forces—first, to see if the proper hygienic rules regarding clothing, exercise, and cleanliness are scrupulously carried out, and that the proper functions of secretions and excretions are thoroughly understood. If aside from these precautions there is still pain, a local investigation should be made by the physician, and the condition carefully studied, the cause removed if possible. To give an opiate in such cases I consider criminal, since the patient receives a double injury; not only is she not relieved permanently, but she is robbed of much of her normal resistance, and I fear many have become chronic invalids, for it is a constant struggle to overcome the after-effects of the opiate before the time arrives for another relief of the same sort. If the patient escapes becoming addicted to the opium habit, she cannot escape the local gastro-intestinal irritation which is invariably set up, and which will defy all medication so long as its cause is kept up.

I can at this moment call to mind three cases, in which three weeks out of four all sorts of laxatives are used to overcome the amount of morphine taken during the fourth week; the complexion is sallow, the breath heavy, the skin impure, and how can it be otherwise? If an examination reveals no functional trouble other than the local congestion, or possibly some displacement downward induced by improper clothing or a lack of attention to the proper excretions, is it not at once clear that an opiate in the long run increases the cause of pain? Lulling the pain induces no cure, and the resulting constipation acts in two ways to make the patient worse: first, the pressure of a distended bowel; second, the absorption of effete products. Let such conditions continue for some years, as they often do, and we have other factors enter the field to make life miserable—a sluggishly acting liver or kidneys, a worn-out stomach, and not infrequently a nervous wreck.

In order to emphasize this point, I will only have to call attention to a series of comparative experiments on animals* made by Dr. Edward Levinstein, and reported in his book on *Morbid Craving for Morphine*, whose deductions from a number of experiments are as follows:

"1. That internal applications of morphine sooner paralyze the digestive powers of the stomach than the subcutaneous injection.

"2. Both ways of administering morphine bring on functional disorders of the secreting nerves.

"3. Both cause catarrh of the stomach and intestinal tract.

"4. Large doses of morphine given internally cause a subacute catarrh of the stomach, on account of the irritating chemical action of the morphine.

"5. The subcutaneous injection of morphine causes a chronic catarrh of the intestines in a mechanical manner, in consequence of the impaired influence of the secreting glands, due to the action of the morphine; the secretion of the digestive

*Covering a space of time from six days to five weeks.

fluids is stopped altogether, or at least diminished in quantity, and consequently the intestinal tract is encumbered for a longer time by the ingesta."

The same author speaks of amenorrhœa and sterility as being a sequence of the continued use of morphine, drawing largely upon the results of his own observations, and accepts Pflueger's theory in explanation of it.

In these days, when "preventive medicine" is being advocated by all of us who desire to place medical science on the highest standard, should we not think many times more than twice before we write a prescription for an opiate to relieve pain? In the face of all these facts, it becomes a serious question of right and wrong if we stop short of exerting all our knowledge to study the *cause* of the pain we have been called in to alleviate. Often the prescription-book is entirely useless, unless its blanks could be filled with directions to the patient how to dress, eat, and give herself the physical care she needs.

The use of morphine after pelvic operations has been discarded by most of our operators, and clearly has been the means of reducing mortality rates as well as obviating many of the dreaded after-complications. I recall in one of my earlier operations the advice given by one of our older physicians to rely on opium and calomel, which I followed, with the result of having on my hands a sufferer from insomnia and chronic constipation after I had discontinued its use; had I not been careful to destroy all prescriptions, I feel certain I would have had more trouble. Another case comes to my mind of a patient who had a section done for some pelvic trouble by a physician, who also believed in the opium after-treatment. This patient came under my care later, and confessed that she had often helped herself to a suppository after the doctor had stopped their use. My object in referring to these cases is to show the danger of setting up the morbid craving and its attendant evils with only medicinal doses and in the space of two or three weeks; showing at once the danger a prescription containing an opiate may induce in the hands of a nervous patient who has periodical attacks of pain. Such cases do not alway reach the state necessary to require hospital treatment; hence are often exceedingly vexing to the physician and surrounding friends. A direct accusation to the patient would often fail to bring the results desired, while the friends and relatives cannot always be relied upon for the tact and discretion so necessary. For that reason the physician must often exercise a vast amount of patience and time to educate the ones immediately concerned, and to prove the deleterious effects the use of opiates have, and then, *perhaps*, the patient can be cured.

It may, perhaps, be of interest to quote from a discussion on morphine in the British Gynæcological Society, 1889: Dr. Bantock gave us his experience after surgical operation "that patients were much better off without it—they escaped the restlessness which was left as the opium wore off." Dr. Bedford Fenwick called attention to the fact that opium increased the congestion of the kidneys to a dangerous extent, and might even go to a complete suppression of urine; also, that it caused a complete atony or paralysis of the muscular tissue of the intestines, thus preventing their acting. Dr. R. T. Smith had given two doses of a quarter-grain of morphine each in a case of severe shingles; the patient had suppression of urine for twenty-four hours. Dr. Thomas Savage, in his address read at the annual meeting of the Birmingham and Midland Counties Branch of the British Medical Association, says: "It is not long since it was the custom to administer opium and morphine as a routine treatment in all cases of peritonitis and many other conditions in the abdomen. We have now learned the inadvisability of so doing. May we not extend the withholding of these and similar drugs in other states? I have myself thought that the general practitioners rely too much upon anodynes."

In this matter of too sympathetic and assiduous medical treatment errors rather of judgment than intention are often committed.

Of no less importance is the behavior of an opiate on a patient of uric acid diathesis, in which a demand for relief of pain on the part of the patient often becomes quite urgent. Here again the researches of Dr. A. Haig show us that the drug tends to store up the acid; that when elimination begins to take place there is often a return of the pain, the patient again demanding relief—in this manner a cycle can easily become established. These pictures teach us the impotance of keeping the drug *entirely out of the reach of the patient*, and the necessity of its *careful* and *conscientious* use where it may be indicated.

BRONCHITIS, ACUTE.

(Da Costa.)

℞

Vini ipecacuanhæ	2 drams.
Liq. potass. citratis	4 ounces.
Tinct. opi. camph	1 ounce.
Syr. acaciæ	1 "

M. Sig. Tablespoonful three times daily.

DIAPHRAGMATIC HERNIA.

By JOHN M. CURRIER, M. D.,
NEWPORT, VERMONT.

On January 14th, 1892, I was invited to be present at an autopsy of a man who had died the day before. He was sixty-seven years of age; body well nourished. On January sixth the patient ate some pea soup for dinner; shortly afterwards he was taken with pains in his bowels, which was treated with domestic remedies, only partially getting relief. Vomiting came on, colic increased, and a physician was called who relieved him by the use of hypodermic injections of morphia, but the symptoms soon returned. It was necessary to keep the patient under the influence of anodynes in large doses, to give him any comfort. He had only one evacuation from his bowels after he was taken, although repeated injections had been given. Very dark grumous matter was ejected from the stomach. The patient continued to grow worse until his death early on the 13th.

The autopsy was held thirty-two hours after death. An incision was made from the top of the sternum to the os pubis, through the skin and subcutaneous tissues to the sternum, and through the abdominal walls. On turning these abdominal flaps to the right and left the ascending colon was brought into view; it was distended with gas fully four inches in diameter; the head of the colon was displaced, and laid up in the hernial sac through an opening in the diaphragm extending from the mediastinum to the right five inches along the thoracic walls. The head of the colon was pendulous fully twelve inches, and seemed to have floated around in the abdominal cavity at all times according to the amount of gas it contained. The head of the colon which laid in the sac was highly congested. The appendix was seven inches in length and one-fourth inch in diameter. On pulling the colon out of the sac another loop of intestine was observed to have preceded the colon. It consisted of a portion of the transverse and descending colon, distended with gas; more highly inflamed, and approaching nearer to strangulation than the head of the colon. So that none of the contents could pass the constricted parts. After pulling out the second, a large portion of the omentum was found in the sac having been pushed up in by the loop of the former. The stomach was empty and not congested. The gall blader was filled with dark bile. The liver normal. The remaining portions of intestines not involved in the sac were not distended with gas and were pale and bloodless.

The hernial sac consisted of the peritoneal membrane, somewhat thickened, but having no adhesions to the abdominal viscera nor to the lungs. It seemed to have taken on an elasticity which allowed the sac to become largely distended without rupturing. The edges of the torn diaphragm were thickened and rounded, the sac gliding over the border easily.

I got the early history of this case from the wife of the patient. Nineteen years ago he had a very severe attack of vomiting, with colic, accompanied with distressed breathing and cough, which attack lasted him many days, but gradually recovered. He was ever after this subject to occasional attacks of colic with vomiting, cough and distressed breathing, but would recover from them in a few days. He was quite a hearty eater and his body was well nourished. About eight years ago he had cerebral hæmorrhage, followed by hemiphlegia of the left side, from which he readily recovered. There is no doubt about this hernia having existed nineteen years, yet the man was in tolerable good health except when he ate something which created gas in the intestines. The opening was too large to produce strangulation under ordinary circumstances.

I learned from the physicians who attended him, that over the region of hernia it was extremely tympanitic and painful. The case was regarded as one of "stoppage of the bowels." The question came up: Could laparotomy have relieved, and saved the patient? Of course the intestines in the sac could easily have been pulled out, the gas evacuated, and every thing gone on as usual, but during the healing of the abdominal wound, the intestines would again fill with gas, and float up into the sac.

ALCOHOL AND THE NERVE CENTRES.

Dr. Shorthouse has been investigating the effect of various intoxicating liquors on different parts of the cerebellum when imbibed not "wisely but too well." Dr. Shorthouse finds that good wine and beer indiscreetly imbibed have the effect of making a man fall on his side, whisky, and especially Irish whisky, on his face, and cider and perry, on his back, these disturbances of equilibrium corresponding exactly with those caused by injury to the lateral lobes and to the anterior and posterior parts of the middle lobe of the cerebellum respectively.

SOME NEW STUDIES OF THE OPIUM DISEASE.*

By T. D. CROTHERS, M. D.,
SUPT. WALNUT LODGE HOSPITAL, HARTFORD, CONN.

As a preface, I wish to express my emphatic dissent against the common use of the word *habit*, in describing the opium disease. The popular meaning conveyed by this term is some state or condition voluntarily acquired and retained with the certainty of being thrown off at any time at the will of the patient. This view assumes a knowledge of physiology and psychology of the brain and its functions that is not yet attained. Hence the use of the word is incorrect, wrong, and contradicted by the facts in the clinical history of each case. It also conveys a false impression of the nature and origin of such cases, and is a word to which different meanings will always be given. No other word is more misleading and confusing, when applied to opium, alcohol, and other borderland neuroses.

Beyond all question, the toxic use of opium and its alkaloids is rapidly increasing. Only about 50 per cent. of opium and morphine manufactured is required by the legitimate demands of medicine and pharmacy. The enormous balance is consumed in some unknown way. Comparative estimates make the number of opium cases in this country over a hundred thousand. Whether this is correct or not, it is evident that the number is very great and largely concealed, and many of them are very hopeless and difficult to treat. The natural history of such cases indicates a steady, progressive degeneration, on to death. Recovery is rarely spontaneous, and without the aid of applied science. Up to the present all clinical studies have been confined to the symptoms and treatment, starting from some indefinite point after the opium addiction begins. The old superstition of a moral origin, and some wilful, wicked impulse, is accepted as the first original cause. Writers, and even specialists, seldom go back into the early etiology, or inquire what conditions or forces led to the first use of opium. The object of this paper is to trace some recent facts which throw new light on this unknown stage of etiology.

From a careful clinical study and grouping of the history of a number of opium cases, it is evident that a large proportion have a distinct *neurotic diathesis*, or, more literally, have inherited from their parents some condition of brain and nerve defect which favors and predisposes to the development of neurotic diseases. A more careful study of these records shows that in some cases an *opium diathesis* is present, or a special inherited tendency to use opium. Here are two conditions which influence and favor this disease. It is a well-known fact that a large proportion of all nerve and brain diseases appears in children of neurotic and defective parents. Such children have received some special tendency and predisposition favoring the growth of nerve diseases, springing into activity from the slightest causes.

The latency or activity of this diathesis will depend on certain conditions of life and surroundings, which in many cases can be traced. In some instances the diseases of parents reappear in the children, in others in allied diseases, and not infrequently these defects pass over and reappear in the third generation. Often such defects are dormant, and only break out from the application of some peculiar exciting cause. Thus a hysteric mother and paranæic father were followed by three children. One was an alcoholic, the second was a wild, impulsive temperance reformer, the third was a sad, depressed, melancholic man. In the third generation opium and alcoholic inebriety, insanity, pauperism, also feebleness of mind and body, appeared. These varied forms of nerve diseases all had a neurotic diathesis as a basis, and the different phases were the direct result of different exciting causes. These facts are numerous and well attested, and so uniform in their operation that it is entirely within the realm of possibility to predict that, from a knowledge of the diseases of the parent and the environment of the child, certain forms of degeneration and diseases will appear with almost astronomical precision. This term neurotic diathesis covers a vast unknown field of causes which extend back many generations. The evolution of brain and nerve defects can often be traced through the realms of environment, nutrition, growth, and development. Medical text-books and teaching which fail to recognize this, give very narrow conceptions and strange exaggerations of the influence and force of many insignificant and secondary factors in the production of disease. The opium-taker has often this neurotic element in his history. It may be traced back to his ancestors, or it may be associated with brain or nerve injuries, cell-starvation, faulty nutrition, auto-intoxications, brain strains, or excessive drains of nerve force.

*Read before the Philadelphia County Medical Society, Jan. 27th, 1892.

A train of predisposing causes may have been gathering for an indefinite time back. Then comes the match which kindles or fires the train of *gathering forces.* This same train of exciting causes may not explode, because the germ soil is absent. Opium in all forms is given daily, and yet only a comparatively small number of cases become addicted to its use. Why should an increasing number of persons take opium continuously for the transient relief it gives? Why should the effects of this drug become so pleasing as to demand its increased use, irrespective of all consequences? The only explanation is the presence of a neurotic diathesis, either inherited or acquired. The existence of a special opium diathesis has been doubted with supercilious contempt by many writers. Any clinical study of cases will show the error of such doubt. The notes of a few cases which have recently come under observation are illustrations by no means uncommon, and indicate the concealed factors of disease in many instances:

In Case 1 the mother was a secret morphine-taker, the father was a hypochondriac and melancholy clergyman. Two children followed, who were highly educated and healthy. One, a boy, became a physician, and at thirty suddenly began to use morphine and soon became a chronic case. The other, a girl, was well up to her marriage at twenty-four, when she began to use opium, for no apparent reason.

Case 2, reported by the late Dr. Parrish. Both parents used opium for sleep and neuralgia, and died leaving three children under five years of age. They were brought up in temperate families, and had no knowledge of the opium addiction of their parents. One, at twenty, continued the use of morphine after it had been given for some intestinal trouble. The second child suffered from dysmenorrhœa and began to take morphine for this trouble, and became a morphine maniac. The third child was a druggist, who at thirty was a confirmed opium taker.

Case 3. Both parents were neurotic, and probably opium-takers. Both died, leaving an infant child which was excessively irritable and peevish. By accident, morphine was used as a remedy, and from thenceforth the child would become delirious unless morphine was given daily. All efforts to break up its use failed, and for five years increasing doses were used constantly until the child's death.

In Case 4, five children of unknown parentage were all opium takers; all lived in different conditions and had different occupations. Two began the use of opium from some bowel trouble. Two have been under treatment, and relapsed (?).

The relief which this drug brings on all occasions, and its impulsive use, are unmistakable indications of a distinct opiun diathesis. I believe a careful clinical study will reveal many such instances.

There is a large class of opium cases in which a complex diathesis exists—particularly following inebriety and various forms of brain exhaustion. Often alcoholics will use opium irregularly and transmit to their descendants a diathesis which very commonly favors the use of this drug. Thus the alcohol diathesis frequently becomes the opium craze, with but slight exposure. Both of these disorders are rapidly interchangeable. The children of opium-takers may turn to alcohol for relief, and *vice versa.* It is clear that the moderate use of alcohol produces a degree of degeneration that frequently appears in the next generation as predisposing causes to the opium or allied diseases. Clinical study of cases brings ample confirmation of this. The children of both alcohol and opium inebriates display many forms of brain degeneration. The paranæics, criminals, prostitutes, paupers, and the army of defects, all build up a diathesis and favoring soil for the opium craze. Descendants from such parents will always be markedly defective. They are noted by brain and nerve instability, hyperæsthesia, and tendency to exhaustion; also extreme pain from every degree of functional disturbance, with low powers of restoration, inability to bear pain, and suffering from mental changeability, impulsiveness, and drug credulity, etc.

These characteristics are prominent, and mark a neurosis that quickly merges into the opium disease. Yet a minority of these cases show a sensitiveness in the effects of opium that prevents them from using it. I have seen a neurotic patient become dangerously narcotized by the use of half a grain of solid opium. Some of the alcoholics and other narcomaniacs have exhibited an incompatibility to opium that is often startling. The emesis and prostration, and the brain-stimulation which approaches and becomes hyperæmia from one or more doses, are familiar to all. This intolerance precludes the use of the drug, and is recognized with alarm by the patient. On the other hand, when the effects are rapid and marked, relieving pain or restoring the disturbance of the functions with no other than a pleasing sense of rest and cure, a dangerous diathesis should be

suspected. While the physician recognizes the constitutional incompatibility in one case, he ought not to overlook the abnormal attractiveness of the drug in the other. The dose of morphine which gives the first complete rest, or calms the delirious excitement, or relieves the neuralgic pain or the digestive disturbance, soon calls for its repetition, and many physicians will unconsciously sanction and advise its use. Thus, far more fatal conditions are cultivated and roused into activity. In all neurotic cases, the use of opium in any form when given, should be concealed and watched with care. If a special predilection for this drug appears, equal care and skill should be exercised to divert and change it. Opium should only be used from a knowledge of the nature and character of the case. I have seen the most disastrous results from the reckless use of morphine with the needle. Recently, a man to whom morphine was intolerant was cut and stunned by a falling plank in the street. The surgeon gave him a hypodermic of morphine, and ordered him to the hospital. He died in a short time from opium neuroses. Police surgeons often make this mistake, giving morphine that from some unknown reason becomes fatal.

There is another class of opium-takers in which abnormal nutrition seems to be the most active factor in the causation. The neurotic or opium diathesis is not apparently present, and opium-taking dates from some nutrient disturbance. Such cases are very commonly sufferers from dyspepsia, derangement of the liver and bowels. They have a deranged appetite, headaches, cramps, thirst, and fever at times, with nausea. They are anæmic and hyperæsthetic, and complain of varied pains and neuralgias. These cases are evidently ill-nourished, and, in all probability, suffer from imperfect digestion, assimilation, and elimination of food products and waste material. Poisonous compounds and auto-intoxications form sources of serious trouble. The brain suffers from fatigue and pain, the cells are imperfectly nourished, and congestions, complex neuralgias, nerve irritation and instability follow. For this condition opium is almost a specific paralyzant. These cases are found among the over-fed, the under-fed, and those who neglect common hygienic rules of living. Cases of the over-fed are usually epicures, gormands, and persons living sedentary lives, and eating at all times and places. Dyspepsia and derangement of the bowels and kidneys make them drug-takers; then follows opium in some form. Defective elimination and auto-intoxications are always present. The under-fed are usually misers or persons very poor and very neglectful of themselves, or paranæics who have some food delusion. They are practically suffering from cell and tissue starvation and nutrient debility. The same dyspepsia and bowel derangements follow. Then follows drug-taking or special foods, and soon opium is discovered and adopted as a remedy. The same poisonous waste products appear from deranged assimilation; also, elimination and the nerve centres are deranged by these new and dangerous chemical compounds. The class of persons who, from simple neglect, become diseased are often the very poor and ignorant, or some division of the great army of borderliners, who live both mentally and physically on the very frontiers of sanity and insanity. Such persons clearly suffer from many and various forms of auto-intoxications, and this is proven inductively by the result of eliminative treatment. In all of these cases of nutrient neglect, many favoring conditions encourage the use of opium. These cases are numerous and comprise a large part of the invalids, hypochondriacs, and chronic drug-takers who are seen in our offices and at the dispensaries. They are all practically suffering from faulty assimilations, and faulty eliminations and the irritation of retained poisonous compounds. Opium is a remedy of positive force in covering up the protests of the defective cells and irritable nerves. Often these cases are concealed and are partly the result of previous disorder, and partially acquired from the effects of opium.

Next to this class of nutrient sufferers who become opium-takers, are those who have some entailment of disease or injury. In their history it will appear that some stage of invalidism was present, dating from brain, nerve or bodily injury. Fevers, heat, or sunstrokes, brain shocks from any source which are followed by unconsciousness, or marked mental perturbations, with exhaustion, and also a profound lowering of all the vital forces. These and other events have left damaged functional and organic activities, manifest in various neuralgias and physical disturbances.

The use of opium conceals and covers up this trouble. Many veterans of the late war have become opium maniacs for the relief of their pains and sufferings, and this is often concealed where it might possibly peril the procuring of a pension. The pension bureau should recognize the use of opium as a natural sequence and entailment following the disease and injury in the service. In Prussia

both alcohol and opium inebriety are treated as diseases when occurring in the army or civil service. The suffering and hardships growing out of the war has been the exciting cause of a great many opium cases. Many persons who have no special nerve diathesis in their history, after some severe illness, injury, or mental strain exhibit a degree of nerve instability and feebleness that is significant of serious organic change. Such persons manifest perversions of taste, with delusions of foods and medicines, and are on the border-lines of narcomania, ready to use any food or drugs which will bring even transient relief. The use of opium is always perilous. Why all these and similar cases do not become opium-takers, is owing to the absence of some diathesis inherited or acquired.

We can see some of the many complex causes favoring brain and nerve strain, with rapid exhaustion and degeneration, and the interchangeability of nerve diseases, in which the use of opium is only another form of the same disease. But we cannot yet trace the early causes and cell-conditions which develop the opium craze. This morbid impulse, like the delirious thirst for water on a desert plain, completely dominates all reason and so-called will-power, and every consideration of life and surroundings. It is more than an accident, more than a failure to reason and act wisely; it is a disease, an organized march of dissolution. The demand for opium is only a symptom; the removal of opium is not the cure. Some central brain-degeneration has begun and is going on. Narcomania, a morbid thirst for any solids or fluids that will produce neuroses, is the general name, and opium mania is only one member of this family.

In this study the fact is emphasized that the opium disease appears most frequently in persons who have a neurotic and opium diathesis, and also in persons who are suffering from nutrient disturbances, and those who are invalids or have some entailment of previous disease and injury; also that certain diseases and symptoms seem to furnish favoring soils for its growth and development. While these are but faint outlines of many unknown facts, they are urged as starting-points from which to base other and more accurate studies. The medical treatment from this point of view is very suggestive. Obviously the removal of the opium is not the cure. The various methods of removal detailed with great exactness, as if they would apply to each case, are unfortunate reflections of the failure of the writers, and are based on the assumption that all cases are the same, and the removal of opium is the great essential in the treatment. Basing the treatment on the clinical study of the case, it will be evident that where an opium diathesis exists, the withdrawal of opium should be very gradual. The treatment and surroundings should be arranged with great care and exactness. Such persons should live in an institution for years, or be under constant medical care. The danger of relapse and the future of such cases will depend entirely on the conditions of life and surroundings. Rapid reduction and any heroic treatment is never permanent, even with the consent of the patient. Specifics, faith cures, or any measures that promise speedy cures, are failures from the beginning. The road back to approximate health is straight and narrow, and only along lines of applied science. Where the history of a *neurotic diathesis* is present, the withdrawal of the opium should be equally slow.

More attention must be paid to the brain and nerve nutrition. The removal of opium may be followed by the appearance of very serious disorders, such as epilepsy, hysteria, complex neuralgias and paranæics phases, alcoholism, and various other neuroses. The slow withdrawal of opium enables one to discover and anticipate these neurotic troubles which have been masked before. In one case, suicidal melancholy; in another, hyperæmia of the brain, with delusions; in the third, irritation and delirium; in the fourth, hysterical spasms appeared when the opium was removed. I have seen two cases of general paralysis suddenly spring into great activity after the opium was taken away. This condition was not suspected before. Alcoholism is a very common sequel after the removal of the opium. *Cocaine, chloral,* and almost every drug that has narcotic properties, are also very common entailments. While these are extreme cases, they are likely to be formed at any time. Great care should be exercised in using other narcotics to lessen the irritation from the withdrawal of this drug. Foods and tonics should be given. These cases require the same general treatment as neurasthenia and other states of brain exhaustion. They are drug-takers, and will resort to anything for relief. They are secretive, and require more care and more mental remedies, with long, exact hygienic surroundings.

Where the opium addiction has apparently come from bad nutrition and faulty elimination, with auto-intoxication, the treatment is very hopeful. A long preliminary

course of baths, mineral waters, and tonics should precede the removal of opium. Then the opium may be removed at once, without the knowledge of the patient. In proper surroundings with frequent baths, little danger of relapse or suffering will follow. Careful study and treatment of nutrition and digestion will fully restore the case, and relapse seldom occurs except from failure or neglect of the surroundings.

In the last class, where opium is taken and apparently follows from the entailment of some injury or disease, or the exhaustion of old age, a preliminary period of treatment seems to be required. Often the opium can be abandoned at once for some milder narcotic, and from this by gradations, discontinued entirely. Full knowledge of the diseased states present will always suggest the lines of treatment. In some cases the opium should not be removed; its diminution and concealment is required. In others, its rapid removal is essential. Many varied and difficult questions will appear in these cases. The more accurately the diseased states, also predisposing and exciting causes, the diathesis, and varied influences which have caused opium to be used, are studied, the more accurate the treatment. As in many other diseases, the causes may be anticipated, also neutralized and prevented. Opium-taking should be seen as a symptom; remove or break up the cause, and this symptom disappears.

Routine treatment, either by slow or rapid reduction of the opium, is not wise. The substitution of other narcotics is equally unwise. In a number of cases the withdrawal of opium only unmasks more serious diseases, and is positively wrong. A case of general paresis is now under treatment for the opium addiction. Before this opium addiction began the patient caused great distress by his delusions and extravagantly strange conduct. This treatment was wrong. A rheumatic woman of seventy is going through the same course to be free from opium, which has made life tolerable for ten years past. The treatment of opium mania is something more than the application of means and remedies for withdrawal of the drug with the least suffering. The symptomatology and organic lesions often date back to other causes more complex than opium. The treatment must begin by their removal. The general or special diathesis must be treated; the nutritive disorders, intoxications, and starvations must be recognized and removed. The influence of pathological states from previous disease and injury must be ascertained and treated. The power of environment, climate, occupation, and idiosyncrasies are also powerful factors to be considered.

These are the essential facts and conditions which must enter into the practical treatment. Among the many important problems, that of prevention promises the greatest possibilities. A recognition of the neurotic diathesis and other predisposing causes would enable the physicians to successfully guard against its approach.

The successful *stamping* out of both this and the alcoholic disease will be a reality in the future.

It is evident that the opium disease is still a undiscovered country, and the few student experts have not yet passed beyond its frontiers. This disease is all about us and may invade our homes and firesides any time, and *hence* demands recognition and most careful study; above all, ethical and moral levels. Its laws of growth, development, treatment, and curability all follow the great highway of evolution and dissolution.—(*For discussion, see Society Reports.*)

BROMIDE OF BISMUTH.

This salt has several times been experimented with by physicians of our acquaintance. Small quantities of it were prepared for their use by allowing powdered bismuth and bromine to act together in presence of a little water, driving off the excess of bromine by a current of air and subliming, or rather distilling, the residue.

Victor Meyer has recently published a note on this compound (*Annalen*, 264, 122). He prepared it by gradually adding *finely* powdered bismuth to bromine contained in a retort.

The combination of the two elements takes place slowly, several days being required, at the ordinary temperature, to complete the reaction. The mixture is then distilled, bromine and bromide of bismuth passing over, and a considerable amount of bismuth remaining behind. The latter is again powdered and treated in the same manner. To obtain the bismuth bromide pure, it must be distilled several times. It is finally obtained as a handsome orange-red mass, of a radiately-crystalline or grape-like form. It can be boiled, without decomposition, for many hours, in a flask provided with an up right condenser. Its vapor is deep red, very much like that of suphur or phosphorus sulphide.—*Amer. Drug.*

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting January 27, 1892.

Dr. T. D. Crothers read a paper on "Some New Studies of the Opium Disease." (See p. 372.)

DISCUSSION.

Dr. Thomas J. Mays: This theme has been one of intense interest to me, but I do not feel prepared to discuss the subject. There is, however, one point to which I should like to refer, and that is the relation between opium-taking and pulmonary consumption. We know that there is a strong affinity between alcoholism and consumption, and I would ask Dr. Crothers whether he has observed a similar relation between opium-taking and pulmonary consumption.

Dr. Joseph Hoffman: Looking at this subject from the medical side, I would say that I have taken some trouble to ascertain the frequency with which opium is prescribed by the general practitioner. The ordinary prescription-file of the drug store will show that three out of five of the prescriptions contain opium in some form or other, and I think that more than a little of the responsibility for opium-eating lies at the physician's door. It is prescribed without any attempt at cure, for opium has few curative effects, especially in acute disease.

The question arises, When should opium be used in surgical work? In shock, opium will not effect a cure, except in so far as it relieves pain, and if pain is the only thing to be remedied, often we have the remedy in opium. In cases where the pain is self-limited there is a great divergence of opinion as to whether opium should be used or not. In abdominal surgery we must refuse to use it. In these cases opium, instead of being beneficial, is harmful. Although it lulls pain, it produces much after-discomfort. There may be cases in which you cannot do without it; these are the undiscovered cases of opium-eating. In these cases the surgeon has to choose the lesser of two evils. Opium is injurious not only from its physical effect, but also from its moral influence. Take a patient broken-down with pain, add the pain of operation, and give a drug which destroys the power of self-control, and you introduce a semi-hysterical element which causes unending trouble.

In surgery there are better anodynes than opium. I have found the hydro-bromate of hyoscine to be preferable; it does not cause constipation, and thereby increase the tympany, as does opium; its only bad effect is to diminish secretion. By avoiding the use of opium we secure benefit by toning up the patient. In shock, strychnine will at once put the patient to the point of enduring the pain without any subsequent discomfort.

Dr. M. Price: The responsibility of the opium habit can, I think, be referred directly back to the physician. He begins by relieving the pain, and not only does so, but tells the patient what he is using for that purpose. I cannot speak in regard to the neurotic diathesis, but some of the best developed, and apparently best balanced, patients that I have had, so far as external appearances were concerned, were addicted to the opium habit, and some of them are still addicted to it. If the physician is forced to give opium, he should give it secretly.

As has been said, opium, by its stupefying influence upon the nervous system, covers up and masks the symptoms. The physician also is lulled into a feeling of security, and does not recognize the destructive changes that are taking place, and is only awakened when he finds his patient absolutely dying. I have seen cases of appendicitis where the physician thought that the patient was improving, and yet the abdomen was full of pus and the patient dying. The opium had not only quieted the patient, but also lulled the doctor into a feeling of security. Not only in appendicitis, but in other surgical conditions, where the pain and discomfort is so great as to call for the use of opium, something should be done instead of giving opium, unless the patient is past relief; there opium is proper enough. In abdominal surgery we have come to the firm conviction that opium is uncalled for except where the opium habit has been established.

Dr. J. P. Crozer Griffith: I stand here to-night feeling somewhat alone, since I intend to take issue in some respects with what has already been said in the discussion, and to consider the matter from the standpoint of the physician, rather than that of the surgeon. I agree fully with nearly all that was told us in the papers of the evening regarding the dangers of opium, and assent as well to the statements of Drs. Price and Hoffman, that in nearly every case of the opium habit the physician is probably responsible. At the same time one cannot but be impressed with the feeling that one of

the laity, strolling in here to night, would leave with the thought that opium is an unmitigated evil, a drug which should never be employed under any circumstances whatever, inasmuch as it never did anything but harm. Every unprejudiced physician can only regard this as radically wrong. I say it after mature deliberation, and not on the spur of the moment, but still I say it, that were I compelled to select one drug from the entire list in the Pharmacopœia, and confine myself to its use alone, I would unhesitatingly choose opium.

And though in this I am at variance with what we so often hear uttered in discussions in this Society, yet I trust I am not an antiquated fogy, and I know I try to keep abreast of the times. It has been urged that opium rarely cures disease, but only relieves symptoms, at the same time that it disguises them. I should like to inquire how many drugs in the Pharmacopœia really cure; certainly there are very few. As educated physicians, we hesitate to say that we have *cured* our patients. All that we expect to do is to guide our cases to recovery. I have no reference in this connection to the employment of surgical interference. Were it true that opium never had any powers but those of relief, there would, therefore, be no objection to its use on this score. Well aware of the dangers of the opium habit, I would hesitate long before beginning the employment of the drug in cases which were certain to run a somewhat chronic course, yet in which there was hope of recovery. Dujardin-Beaumetz has made the statement that thirty days' continuous use of opium will make an habitué of anyone. In the light of what has been said in the latter of the two papers of the evening, this is, perhaps, an over-statement. It at least expresses the opinion of an excellent French authority.

There are cases in which the greatest fanatic will probably admit that it is our duty to administer opium in some form. Among these are hopeless cases of cancer. It is true that the drug gradually loses its effect, and that the dose must constantly be increased. But in no other way can existence be made even tolerable. I believe, too, that it is almost a sin to omit the employment of opium in the last stages of many cases of phthisis. The statement has been made in text-books that opium is poison to patients with phthisis. While this may be true in theory, it is eminently untrue in practice. Of course, I have no reference to phthisis in the early stage. There is no question that in this stage we should defer employing it, trying other measures for relief, and devoting our attention to the cure of the disease.

While it is true that opium may occasionally cause—perhaps it is better to say *be followed by*—suppression of urine, dyspnœa. and other unpleasant and dangerous symptoms, we should not totally abandon its employment on this account. I have a patient in whom five drops of tincture of nux vomica is always followed by unpleasant evidences of the physiological action of strychnine, but I shall not on that account refuse to give nux vomica in other cases. I have seen retention of urine follow the application of turpentine stupes, but shall not for that reason abandon their use. So numerous drug-idiosyncrasies exist, that the man who inordinately fears them will never give anything, and had better retire from the profession.

As there are a number of gynæcologists present, I am ready to admit at once that I understand very little about abdominal surgery. But as a physician it is my duty to have some opinions about peritonitis. In former years, before the diagnosis of pathological conditions of the abdomen had so degenerated that it became necessary to cut the patient open in order to discover what was the matter, there were physicians who possessed sufficient diagnostic acumen to recognize peritonitis without this interior inspection. Dr. Alonzo Clark was one of these. Unfortunately for him, he died before he had the full opportunity of learning from the later lights concerning the avoidance of opium in peritonitis and the proper treatment of the affection, and he claimed that in some way it was partially curative. It was his custom to administer opium in very large doses in this disease. Doubtless it was very stupid of him to persist in this practice, but strange to say his cases recovered. It may, after all, not appear so strange when we call to mind that the use of depletives in peritonitis, including laxatives in some cases, had been in vogue up to that time, and with results far inferior to those of Dr. Clark's. For my part, I have yet to hear of any method of treatment which supersedes the administration of opium in this affection—not as a calmative agent, but as a curative one as well. Of course, there are cases in which every physician would counsel operation; but this is in no wise a sanction to indiscriminate laparotomy.

With regard to what has been said about opium in peritonitis beguiling the physician into a sense of false security, it is, of course, necessary that the attendant should have his wits about him, and realize that the drug is

liable to disguise the symptoms by relieving pain. I think, however, that there are other factors than the sensation of pain to indicate the existence of danger-signals.

Then, again, we must not forget that it is often impossible to obtain consent for an operation, however desirable this procedure may appear. In such cases we wish to be familiar with some method of treatment other than the employment of the knife. We shall sometimes be surprised by the recovery under the administration of opium of cases which we deemed hopeless without operation.

Dr. W. M. Capp: It is to be remembered that the physician is often hurriedly summoned to patients with acute symptoms and in great suffering, and it is from these that relief is sought. Generally speaking, it is well to say that we should sit down and study the case, to discover the cause of the suffering, and remove it, so that relief will naturally follow; but practically something more speedy is demanded, and a narcotic may be useful to tide the patient over what would be a critical period of suffering.

Dr. Crothers's paper was very interesting, but I do not know that we can agree with him in substituting the word disease for the word habit in all cases of opium addiction. I think that in many cases the use of opium is simply a habit, in no respect different from the alcohol or the tobacco habit. There are some persons with such weak will-power that they go through life dominated by a habit of some kind. The remark that the physician is largely responsible for the prevalence of the *improper* use of opium is rather too general. It is too sweeping an assertion to say that the physicians are responsible in all cases. It has also been intimated that from the frequency with which opium is prescribed we can easily account for the large quantity which is imported. This is too broad a statement to emanate from a society of this kind. Let me refer to one single fact. It is generally known that almost all patent medicines contain opium, and that there is no country in which so large a quantity of these nostrums is consumed. In their manufacture a large quantity of this drug is used, and it is but a short step from the use of narcotic patent medicines to the direct use of opium. There are many ways other than by the prescriptions of physicians by which people become addicted to the use of opium.

Dr. Edward Jackson: The power of opium to cover up symptoms has been mentioned. This is something more than the power to prevent pain by an action on the peripheral nerves or on the centres themselves. I have seen this illustrated in some cases of insufficiency of the eye muscles. I have one patient with hyperphoria of six centrads, who has suffered much from headache and other effects of eye-strain. If she takes three-fourths of a grain of opium, the hyperphoria entirely disappears. She is not hysterical and is not an opium habitué; she goes many weeks and even months without a single dose. For several hours after taking the opium the conditions of nervous action are so radically changed that the hyperphoria no longer exists, so far as we can in any way discover it. My attention was called to a similar case by my friend, Dr. Charles H. Thomas. In these cases there is certainly some peculiar effect on the coördination of nerve impulses, so that both the pain and also its cause are for the time removed.

In regard to the lessened importation of opium, it occurred to me that this might be connected with the introduction of hyosine and some of the coal-tar derivatives, and their wide use by both the profession and laity; also with the attack led by the abdominal surgeons on the use of opium in what was formerly regarded as its peculiar province, the abdominal inflammations.

Dr. William H. Welch: A celebrated physician of this city once said he could count on the fingers of one hand all the drugs that he had found of real use in his practice, and he would place opium at the head of the list. Now I feel very much the same way. Of course, I recognize the fact that opium, like alcohol, is greatly abused; but I would not be willing to give up either on that account. I have met with a number of persons who have become habituated to the use of opium, but I have seen only one case in which I have aided in breaking off the use of the drug. This patient was a nurse, who had contracted the habit voluntarily. He began the use of morphine to induce sleep, after having met with a bereavement in his family. I think he also suffered from neuralgia. He gradually increased the dose up to two grains a day. After continuing this for two years he decided to give it up, and so he gradually diminished the daily dose for four days, when he discontinued entirely. To relieve the pain in his extremities, he took antipyrine and also bromide of sodium to promote sleep. After abstaining from its use for several months, he went on a visit to New York, and while there was taken with cholera morbus. He applied to the nearest drug-store for relief, and the druggist gave him a mixture contain-

ing opium in some form. From this time he returned to the use of morphine, and soon reached a daily dose of four grains. After continuing the use of the drug now for two years longer, he again resolved to break off the habit, and this time placed himself under my care. It is unnecessary to recite in detail the symptoms that followed, but the extreme muscular weakness was very surprising, especially when we consider that the daily dose was only four grains. In a few days after discontinuing the drug he became absolutely helpless; he could not feed himself, and could not hold in his hand even a glass of water. He became delirious. In the course of two weeks he began to improve, but it was three weeks before he was able to resume his duties. I should add that he took bromide of sodium very freely, and some critics have suggested that the extreme muscular weakness may have been due to this drug. He, however, showed the weakness before the bromide was taken. He took as much as two hundred and forty grains of the bromide daily for several days. I know nothing of his family history, but so far as the individual himself is concerned, there appears to be no neurotic element in the case. It has now been two years since he stopped the drug, and he tells me he has not returned to its use. But these people often practise so much deception that I cannot be absolutely sure on this point.

Dr. T. B. Schneidemann: I recall a valuable little book, now out of print, by Professor Fiske, of Harvard, on alcohol and tobacco. The title-page bears the legends, "I. It Does Pay to Smoke." "II. The Coming Man will Drink Wine." The author is at some pains to define the difference between a stimulant dose and a narcotic dose, the former being such an amount as nourishes or facilitates the normal nutrition of the nervous system, restoring its equilibrium, enabling it with diminished effort to discharge its natural functions. Such a dose, moreover, has no evil after-effect—"reaction"—which belongs only to a narcotic dose, the term over-stimulation being a misnomer, and imported into physiology from *à priori* reasoning. As a stimulant, he declares that these substances diminish the friction of life, and are useful adjuncts to civilization, and that the dose does not have to be increased, and that their use may be dispensed with at any time without exciting morbid craving. Fiske's views are essentially those of Anstie.

Dr. T. Ridgway Barker: There is one point in Dr. Crother's paper that impressed me, and that is the importance of hereditary predisposition. This belongs to what is known as the interchangeable neuroses. If the histories of cases are more carefully examined, we shall find that inherited tendencies have a great deal to do with the use of narcotics and stimulants.

I think the physician should not wholly escape from the charge of too frequently prescribing morphine and other narcotics. It is not uncommon in cases associated with pain for the physician to take from his hypodermatic case tablets of morphine, and instruct the patient to take one every hour or so, according to circumstances. The patient is aware of the nature of the drug and may acquire the habit.

In cases of post-partum hæmorrhage one-drachm doses of tincture of opium certainly have a happy effect. Even where the patient is almost exsanguined, she may recover.

I was glad to hear the recommendation of Dr. Crothers in regard to the gradual diminution of the dose, thus disturbing less markedly the nervous system.

Dr. Hoffman: Very little weight can be attached to the recommendations or argument that certain men used opium twenty or twenty-five years ago with good results. There is no doubt that in certain acute painful diseases opium is indicated, as in rheumatism, the passage of a stone, and in neuralgia. When the surgeon talks about peritonitis, he talks about something he knows, while the general practitioner talks about something he imagines. Nine-tenths of the cases of so-called peritonitis are not peritonitis at all. When the abdominal surgeon opens the abdomen, he makes a peritonitis, for the reparation is due to inflammation. In these cases, no matter how great the swelling and pain, it passes away under the use of salines or calomel. I think that here we have the vantage ground of the argument, for we know what we have done, and we have the results.

Dr. M. Price: I should like to call attention to the statement in regard to the general practitioner and peritonitis, When the physician gets a case of peritonitis that he thinks is going to die, he refers it to the surgeon. The very men who are boasting of their twenty or thirty cures of peritonitis are the men who are referring to the surgeon their fatal cases with quarts of pus in the abdomen. When we cure from 93 to 97 per cent. of the cases that they give up, I think that we have the best of the argument. A case was recently reported from Buffalo of a girl ten years of age treated with mor-

phine for fourteen days, the daily dose finally reaching twenty-five grains. The temperature had disappeared five days before this dose was reached. They then gave her a saline; they had given salines before, but the child vomited it. I cannot understand such peritonitis. Here must be some neuralgic or nervous condition mistaken for peritonitis.

Dr. Werner: The remarks of Dr. Crothers seem to reinforce my position, that when indicated opium should be given with great care, and in such a way that the patient does not know that he is taking opium. Some years ago I was called to see a child one month old. I found it in convulsions, with contracted pupils; the child had previously been well. I asked if they had given any medicine. They at first denied that they had, but subsequently admitted that a neighbor had given the child a dose of medicine for colic. The child died in less than twenty-four hours, and subsequent investigation showed that it had received an eighth of a grain of morphine.

Another case I recall is that of a young girl of strumous diathesis, who had been treated for various troubles, and finally, going to a gynæcologist, a stem pessary was introduced. She came to me, I removed the pessary, and found the uterus and broad ligaments swollen and extremely sensitive; there was menstrual pain. She was placed at rest, with suitable treatment and improved. Being a working girl, she is compelled to be much on her feet, and soon all the old pains returned. I told her that if she could rest she might be comfortable, but that otherwise it would be necessary to remove the diseased appendages. She refused operation, and the last time I saw her she told me a friend promised to give her some powders, which she thought contained morphine. I explained the dangers to her, but in spite of that she is takling the morphine; I do not know what the result will be.

These cases are sufficient to show the necessity of calling a halt. Prescriptions should not be allowed to be renewed at random. The cases for the use of opium are rare, and should be carefully selected, and the physician should give the dose himself.

I fully agree with the remarks made by Drs. Price and Hoffman regarding the use of opium in abdominal work, and feel certain that many lives are saved by having given up its use; it has certainly often lulled both patient and physician into a dangerous feeling of security until it was too late. I recall one case of septic peritonitis, which I saw in consultation. Although the patient was comfortable after calomel and salines, I knew from the pulse and temperature that there was pus, and suggested operation. The family physician refused operation unless I could show him that pus was present. I agreed to remain in attendance, provided opium was not given. On Wednesday he gave the first dose of opium, for what reason I do not know; there was no pain and there were daily movements. After the opium, distension of the abdomen occurred, and death the following Sunday. In these days, when we are trying to have cleanliness in everything, why should we shrink from giving salines and clearing the bowel of any foul material? Why should we block the bowels with opium when we know that the products are reabsorbed? These are questions I should be glad to have answered from the other side.

Dr. Crothers, of Hartford, Conn.: The interest which this subject has excited is very pleasing to me. The point which I tried to make clear is that these are neurotic cases, either acquired or inherited, and that we should treat them as such, and bear this fact in mind in our use of opium. If we have a neurotic case, we should remember this predilection to the opium habit.

Dr. Mays was among the pioneers who exemplied the close connection between alcoholism and consumption, and between opium-taking and consumption. Phthisis, alcoholism, opium-taking and a host of other affections,are neurotic conditions, and interchangeable one with the other.

I have strongly objected to the word habit, because its exact meaning is not understood. We use the word in its common sense and not in its scientific sense.

There are many reasons for the discrepancy between the quantity of opium imported and the quantity used legitimately. It shows that opium-taking is increasing, and that opium is used in various secretive ways.

I think that there are no physicians in general practice who will not regard opium as a bad remedy. I think that the statement that it is one of our chief remedies will be confirmed by all. It is, however, clear that it should be given with great caution and its use concealed from the patient's knowledge. We cannot dispense with it under any circumstances. My principal point has been to call attention to the neurotic character of these cases and not to disparage the use of opium.

With regard to the treatment of opium cases, we come to a wide field which the general practioner is not quite ready to enter. The routine treatment of diminishing the

quantity of opium as the only plan of cure employed must be abandoned. Opium must be retained or diminished according to the case. In some cases it would shorten life if the opium were diminished. In the large proportion of cases, however, the opium can be removed. The routine plan of diminishing the opium gradually or rapidly is largely empirical. No one should undertake the opium-treatment without knowing the dia thesis and condition of his case, and then the question of the remeval or diminution of the opium becomes clear and the result satisfactory.

SELECTED FORMULÆ.

THE KEELEY CURE.

Dr. H. E. Whitsey writes to the *Medical World* that the following produces a mixture which comes very close to the much-vaunted one used by Keeley:

℞
Sodio-auric chloride.....gr. xij.
Ammonium chloride.....gr. vj.
Strychnine nitrate.....gr. j.
Atropine.....gr. ¼.
Extract cinchona comp. fluid.....ʒ iij.
Extract coca fluid.....ʒ j.
Glycerine.....ʒ j.
Water.....ʒ j.

M. Sig. Take a teaspoonful every two houra when awake. And the following hypodermic injection every four hours: 1-10 grain of the chloride of gold and sodium and 1-40 grain of the nitrate of strychniue.

This will produce the same symptoms and same results as the Keeley cure.

ECZEMA.

℞
Papoid.....gr. xij.
Pulv. boracic acid.....gr. v.
Aquæ destil.....ʒ ij.

Ft. solution. Sig. To be painted on the parts twice daily.

This is a successful application in cases of eczema, psoriasis and callosities of the epidermis.

LOCAL ANÆSTHESIA FOR SLIGHT OPERATIONS.

℞
Chloroform.....10 parts.
Sulphuric ether.....15 "
Menthol..... 1 "

M. Sig. To be used with an atomizer. The anæsthesia lasts from two to ten minutes.

—*Medical News.*

ACUTE TONSILLITIS.

Dr. A. Martin (*La Semaine médicale*, No. 55, 1891) speaks highly of the following:

℞
Acid carbolic, } .....āā gramme 1.
Camphor, }
Glycerine, } .....āā grammes 50.
Aq. destillat., }

Three or four local applications a day.

ECZEMA OF THE ANUS AND SCROTUM

Unna recommends the following:

℞
Olei lini.,
Aquæ calcis,
Zinci oxidi.....āā ʒ j.
Iodoformi.....ʒ ss.

M. Sig. Apply locally.

—*L'Union Médicale.*

CHRONIC DIARRHŒA WITH INTESTINAL FERMENTATION.

℞
Salol..... 3 parts.
Ol. ricini..... 15 "
Symp rhei..... 30 "
Gum arabic qs.,
Aquæ destil.....120 "

M. S. Tablespoonful every hour till bowels move.

—*Le Prog. Med.*

HÆMOPTYSIS.

(PEPPER.)

℞
Acidi gallici.....2 drams.
Acid sulph. aromat.....1 dram.
Glycerine.....1 ounce.
Aq. dest., enough for.....4 ounces.

M. Sig. Teaspoonful at dose—re, eat frequently.

NERVOUS COUGH.

Prof. Bartholow frequently orders:

℞
Acidi hydrocyanic dil.....ʒ j.
Tinct. sanguinariæ.....ʒ ss.
Syr. senegæ.....ʒ iv.
Aquæ lauro-cerasi.....ʒ vij.
Syr. tolu.....ʒ ij.

M. Sig. From ten drops to a teaspoonful every four hours, according to the age of the patient.

ERYSIPELIS.

℞
Acid carbolic.....½ drachm.
Tr. iodine.....½ "
Alcohol.....½ "
Turpentine.....1 ounce.
Glycerin.....3 ounces.

M. Sig. Apply with camel's hair pencil several times daily, or on a soft cloth.

—*Ind. Pharm.*

ANTISEPTIC TREATMENT OF CHRONIC DIARRHŒA.

This consists in the employment of enemata of salicylic acid solutions and in the administration of rhubarb by the mouth.

℞
Acid salicyl.....gramme 1.
Aquæ destil.....grammes 500.
Alcohol, q. s.

M. Sig. For one rectal injection.

This is injected through a long tube. The injection is repeated several times a day.

The formula containing the rhubarb is as follows:

℞
Salol.....grammes 4.
Ol. ricini..... " 20.
Syrup. rhei..... " 40.
Aquæ cinnamon..... " 150.
Gum arabic, q. s.

M. Sig. Tablespoonful every hour till the effect is produced.

For diet, milk, eggs, etc., are ordered.—*France Med.—Rev. Int. Bib.*

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LEADING ARTICLE.

CHLORALAMIDE AS A HYPNOTIC.

The powerful hypnotic properties of chloral have rendered it one of the most valuable agents in the Pharmacopœia, but its use has been restricted, owing chiefly to its decided depressant action on the circulation and the consequent serious results that have from time to time been observed. A number of endeavors have been made to so modify the chloral molecule that its hypnotic properties should be retained and other undesirable actions eliminated, as well to add some new and desirable actions. During the last few years we have had offered to us a number of such compounds, notably among them being *somnal, hypnal* and *chloralamide.* Somnal is a liquid discovered by Radlauer, who claims it to be a distinct chemical compound resulting from the mixture of chloral, alcohol and urethane, and to have the formula of $C_7H_{12}Cl_3O_3N$. Hypnal is a combination of chloral and antipyrine molecules, and is chemically a mono-chloral-antipyrine. Chloralamide was introduced by Mering. It was hoped by the introduction of an amide molecule into that of chloral that the depressant effects of the latter upon the circulation might be replaced by those of the opposite character of ammonia. Since formamide contained the largest amount of ammonia of all the amides it was selected, and upon being mixed with chloral-anhydride gives rise to chloralamide, or what is properly speaking chloral-formamide.

The first reports of the clinical use of this substance appeared in August, 1889, and since that time sufficient statistics have accumulated to enable us to reach fairly definite conclusions as to its probable value in clinical medicine. Without mentioning isolated cases we will refer to the results of a number of investigations which have a special value chiefly owing to the large number of cases studied.

Hagen and Hüfler employed it 118 times in twenty-four sick and four healthy persons. Twenty-six of the number on whom the

drug was tried gave good results. The doses ranged from thirty to forty-five grains. Women appeared to be more susceptible than men. As a result of these observations they concluded that chloralamide was a powerful hypnotic and equal to chloral. In one case they noted collapse. Reichmann found that two or three grammes were sufficient to produce deep sleep. Rabow employed it in fifty-two instances, and in but few was there any failure or unpleasant after-effects. Peiper used seventy-six doses in twenty-four cases, and states that he found it a good hypnotic, but not absolutely reliable; that its action begins within thirty or forty minutes after the dose; that it is of value in a large range of cases; that children are very susceptible to it; and that headache, vertigo and weakness of the joints occasionally are sequelæ. Alt noted twelve failures in forty-one cases.

Halasy, from an experience of one hundred and ninety-one administrations in thirty-five persons with various maladies, concluded, that chloralamide is a good hypnotic, but not absolutely sure in its action; that in cases of insomnia caused by pain or cough it is rarely efficient; that it exercises an unfavorable effect on the heart and circulation; that it cannot be prescribed with safety in cardiac lesions; that its ingestion is sometimes followed by disagreeable secondary symptoms, such as headache, vertigo, lassitude and dryness of the throat, although none of a serious character; and that in some cases it induces disorders of digestion and vomiting. He did not observe any cumulative action.

Osler used it in fifty cases to which one hundred and eighty-six doses were given. Forty were poor sleepers, and ten were not troubled with sleeplessness. The list of diseases with which some of these individuals were affected embraced phthisis, cardiac disease, chronic nervous affections, diabetes, aneurism, typhoid fever, pneumonia, bronchitis, etc. The dose varied from ten to sixty grains, both in single and divided doses. The results he classifies under three heads: those in which there was an undoubted hypnotic action; those in which the action was uncertain; and those in which the results were unmistakably negative. Of the one hundred and eighty-six trials, eighty-six, or 46.32 per cent., showed positive results; eighty-five administrations, or 45.69 per cent., gave results of a doubtful character; and in fifteen trials the results were uncertain. In sixteen instances ill effects followed—headache in eight, a sense of being dazed and confused in four, and in two, mental derangement. Sleep followed within an hour, and generally within half an hour, in nearly every positive case. No cumulative action was noticed.

Robinson gave one hundred and fifty administrations in fifty persons. In thirteen the effect was good, in fourteen, passable, and in twenty-three, negative.

W. Hale White used it in twenty patients suffering from various illnesses, in all of whom insomnia was a troublesome symptom. The drug produced comfortable sleep in all the cases except two; one of these was suffering from delirium associated with cerebral hæmorrhage, and the other had rheumatic fever complicated with delirium tremens and salicylic acid poisoning. Both these patients died shortly after admission. Some of the other cases had extremely painful diseases, and yet chloralamide produced sleep. One woman who had a thoracic aneurism preferred it to morphine, and another patient who had carcinoma of the stomach also slept better with this drug than with morphine. The patient with carcinoma suffered intense pain, yet dozed comfortably after chloralamide. In general, both he and the attendants in the hospital found that the patients slept better after chloralamide than after any of the recently introduced hypnotics. In none of the twenty cases did any ill effects follow which could be looked upon as contra-indicating its use, nor did he ever observe any depressing results. The time elapsing between its administration and the beginning of sleep varied between a quarter of an hour and two or three hours. When given in the evening, the patient when once asleep usually slept till morning. Dr. White has noted, as have certain others, that after a dose in the

evening the patient sometimes does not go to sleep until the next morning, and then remains asleep all day. The reason for this action, he thinks, is to be found in a slow absorption owing to the feeble solubility of the drug in water (five hours are required to disolve twenty grains in two ounces of water). He always prescribes it with spirit—twenty grains are dissolved by one drachm of rectified spirit in fifteen minutes, and water may be added to this solution without precipitating the chloralamide. A good way of giving it is to dissolve it in a little brandy, add water to the liking of the patient, and drink shortly before going to bed. He also calls attention to the important fact that if given in milk, it is not only insoluble, but sticks to the sides and bottom of the glass, and is troublesome to swallow. Moreover, it should never be prescribed with alkalies or dissolved in hot water. Thirty grains he usually found sufficient. As a result of these trials he thinks that in chloralamide we have a safe hypnotic, which has hardly ever any depressing action, and which very rarely gives rise to any unpleasant after-effects.

Gerisch prescribed chloralamide in thirty-two cases, giving thirty grains at night. This dose was usually sufficient to induce sleep within a half hour. A more certain effect and longer sleep was obtained when forty-five to sixty grains were given. He considers chloralamide very valuable because of its decisiveness and the absence of unpleasantness. In sleeplessness due to pain, he states that the effects were negative. He also believes that it is not a dangerous body, but that headache and vomiting may occur after a very large dose. Digestion and the renal function were not affected, but the pulse generally became softer and more frequent. Umpfenbach employed it in fifty-five cases, twenty-three of which were men and the remainder women. In the greater number of them the results were everything that could be desired, although the symptoms in some cases were very severe. Considerable importance rests with the fact that in every instance the drug was well borne, even when taken for months together. No action on the circulation or genito-urinary system was detected, nor were there any symptoms of collapse. In one case it acted as an excitant. On the whole, he looks upon it as a decidedly useful hypnotic. In the insane wards of the Philadelphia Hospital it has had extensive use with the most satisfactory results.

Recently, Gordon has added a valuable contribution to the literature of this subject. His studies were made both on the lower animals and man. The following summary embodies the chief results of his observations:

1. The reflex irritability of the spinal cord was diminished. 2. Peripheral sensation was not reduced. 3. On frogs there were hypnotic action, slowed respiratory and cardiac actions, abolition of reflexes, and subsequent recovery of the normal condition. 4. Blood pressure was slowly reduced with large doses. 5. Pulse-rate was not affected. 6. Respirations were reduced and finally abolished. 7. The conductivity of motor nerves was destroyed, and was not restored by subsequent washing in salt solution. 8. The irritability of muscle substance was destroyed, and was not restored by subsequent washing in salt solution. 9. The excretion of urea was increased by small doses—0.3 to 0.6 gramme—but was diminished by large doses—2 to 3 grammes. 10. The excretion of phosphates was diminished with both large and small doses. 11. The excretion of the fluid constituents of the urine was not constantly affected by the smaller doses, but was diminished by the larger doses. 12. Reaction of urine was not influenced. 13. Color and odor of urine were not affected. 14. No albumen was detected. 15. Action on the skin was negative. 16. Temperature was not affected. 17. Digestion did not appear to be interfered with. 18. Hypnotic action in the healthy was induced with doses of 1.25 gramme and upward. 19. In painless insomnia the results were highly reliable. 20. In insomnia with moderate pain the results were fairly reliable. 21. In insomnia with acute pain it was not reliable. 22. The analgesic action was feeble. 23. The hypnotic effect followed usually within half an hour after exhibition. 24.

The sleep induced was tranquil, pleasant, and natural, and the awakening free from confusion or depression. 25. No deferred action. 26. No craving for the drug was noticed. 27. The point of tolerance was not readily reached. 28. The doses found most reliable were from 2 to 3 grammes. 29. Giddiness and incoördination and headache sometimes followed administration. 30. In senile insomnia, pulmonary diseases and hysteria the results were highly satisfactory.

Finally, we will refer to the experimental research of Prof. H. C. Wood and Dr. David Cerna. Their investigations were made solely on dogs, and their conclusions are as follows: Chloralamid has a slight local influence, and in large doses tends to produce mucous diarrhœa. It acts more powerfully upon the cerebral cortex than upon any other portion of the nervous system of voluntary life, thereby causing sleep and muscular relaxation; but it is also a feeble spinal depressant. It has a powerful influence upon the respiration, in moderate dose, by a centric action stimulating the respiratory-rate, and probably also increasing the actual amount of air breathed; but in toxic dose causing death by paralysis. Its influence upon the circulation is a very feeble one; the changes produced by small doses being probably secondary to other effects of the drug; toxic doses, however, depress the arterial pressure by direct action either upon the heart or upon the muscle coats in the arterioles. The results of their experiments indicate that chloralamide is very worthy of trial as a hypnotic. Its action upon the heart is so slight that it bids fair to be valuable as a hypnotic in cases of feeble heart; whilst its stimulating influence upon the respiration would seem to fit it for employment in cases of nervous exhaustion. Dr. H. C. Wood has used the remedy to a moderate extent in various forms of insomnia, and so far it has seemed to be slower and less certain in its action than is chloral. Rarely have unpleasant after-effects been noted, but he has seen in some cases distinct headache. The statement of Hagen and Hüfler that the drug is especially valuable in cardiac asthma seems to be consonant with Wood and Cerna's experimental conclusions.

While the results of the above investigations are by no means in strict accord, they are as consonant as could be hoped considering the indiscriminate use to which the drug has been put, and are, as a whole, no more discrepant than those obtained during the early clinical investigations with most therapeutic agents. A careful survey of these contributions in connection with many others not noted, shows that the more recent records place chloralamide on a very satisfactory basis; in other words, the clinician is learning in what cases this new hypnotic may be expected to afford entirely satisfactory results.

The clinical value of chloralamide is obviously largely to be determined by its efficiency compared with chloral, which it is intended to replace. Certainly we find in it essentially the same physiological characteristics, some of which being noticeably modified. Like chloral it is a hypnotic with feeble analgesic powers. It is a circulatory depressant, but feebler in its action, and is to be cautiously employed in conditions of circulatory depression. It seems undoubtedly less powerful and prompt in its actions than chloral, but, on the other hand, it is, perhaps, quite as certain. It, like chloral, may give rise to secondary symptoms, such as headache, vertigo, weakness, dryness of the throat, epistaxis, disorders of digestion, vomiting, collapse, mental derangement, etc. Children and women seem more susceptible to it than men. There seems to be no cumulative action; it is in most cases of no value where sleeplessness is dependent upon or associated with much pain; it is absorbed with relative slowness, the action beginning within 30 or 40 minutes; it is best given dissolved in a little brandy with sufficient water; it should never be given with milk, alkalies or hot water.

In conclusion, the actions of choralamide and chloral are essentially identical in character; chloralamide is less powerful and prompt as a hypnotic, but certainly acts less deleteriously on circulation—hence, it may be used with equal satisfaction in most

of the cases where chloral is indicated, and in many in which the latter would not be safe. Chloralamide is certainly deserving of intelligent and thorough investigation, and will doubtless prove a valuable and permanent addition to our materia medica.

BOOK REVIEWS.

DISEASES OF THE MOUTH IN CHILDREN, (Non-surgical), by F. Forchheimer, M. D., Philadelphia. J. B. Lippincott & Co., 1892.

Prof. Forchheimer has brought together in book form, with suitable amplifications, his admirable and much commended essays on diseases of the mouth in children, which appeared in the *Archives of Pediatrics*. His persistent work in this direction and tireless calling attention to the woeful chaos of nomenclature, of pathological misconceptions and symptomatic misapprehensions, resulted in the appointment of a special committee by the President of the American Pediatric Association to revise all this. If he does no other thing of note in his professional career than to have written this excellent book, he will have earned a well deserved meed of praise at the hands of all medical practitioners.

He has made thoroughly comprehensible those not serious but ever present woes of the mouth, next to the stomach the most important part of young children, which rarely jeopardise life, but add so much to their discomfort (and to the solicitous household). He impresses the readers of his book with a determination to explore that prominent cavity with the confident expection of finding many things clear which aforetime were wrapped in doubt and obscurity.

Hereafter no writer on children's maladies, systematic or discursive, will have excuse to ignore or even fail to follow his simple classification, nor need we vex ourselves with the numberless *words* which served to hide so effectually the ignorance of those who follow old trails, nor fail to look for the lesion where it may reasonably be expected to be found. Thereupon, no longer need treatment be tentative and experimental.

Prof. Forchheimer, however, begins at the beginning, the origin of all successful medical thought, more especially, too, in infantile ailments, by a fundamental knowledge based on physiology, holding as he does that chair, as well as of Clinical Diseases of Children in the University of Ohio.

He is to be congratulated on having in the little volume of scarce two hundred pages made clear as noonday a subject till now burdened with effete and conflicting views.

CONSUMPTION—HOW TO PREVENT IT AND HOW TO LIVE WITH IT. By N. S. Davis, Jr., A. M., M. D., Professor of Principles and Practice of Medicine, Chicago, Ill., etc. F. A. Davis, publisher, Philadelphia and London, 1891. Price, 75 cents.

The difficulty in getting consumptives to observe proper sanitation and to carry out certain rules which are more or less in the nature of necessity for successful treatment, is the experience of every physician having anything to do with the management of this class of cases. This is due to some extent, as Dr. Davis intimates, to the difficulty of impressing by brief conversations the recognition of certain facts which are indispensable for their patients' welfare. This led the author to prepare for his patients a series of hygienic rules with brief explanations of their effect and their execution. From these rules this book has grown. It will be observed that Dr. Davis has written for the laity.

The author treats seriatim of the nature of the disease; Nature's means of preventing infection, and predisposition; various means of prevention; hygiene for the consumptive; and, finally, treatment. The work, as a whole, is well done, but the statements regarding the clinical value of alcohol, in the light of present knowledge, constitutes a larger amount of more arrant nonsense than we have read in a similar amount of space for many a day.

A NEW SIGN OF AORTIC NARROWING.

M. Lemoine has observed two cases in which there existed dilatation of the infundibulum of the aorta, there being a narrowing below attended by insufficiency. The clinical signs, which are new, he describes as follows (*Bull. Med. du Nord.*): The classical systolic souffle exists and, in addition, a presystolic rolling sound which increases as the patient passes from repose to action. While scarcely perceptible in the first instance it increases considerably after a rapid walk and presents its maximum of intensity between the third and fourth intercostal spaces of the right side, and consequently a little lower than the point of election for determining sounds of the aortic valves. In the first case observed by the author, a post-mortem examination confirmed the diagnosis.

PERISCOPE.

THERAPEUTICS.

THERAPEUTICS OF PULMONARY GANGRENE.

In view of the unsatisfactory status of the present therapeutics of pulmonary gangrene, Dr. Hewelke proposes the injection of antiseptic solutions through the chest-wall into the gangrenous part of the lung.

One injection is made daily by means of a syringe armed with a needle about 7 cm. in length. From one to two and a-half cm. of antiseptic solution are used for one injection. An alcoholic solution of thymol 1 to 300 or 1 to 200 seems to be the most applicable.

The author applied this treatment in four cases. Of this number, one died of hæmorrhage before any effect, one way or the other, could be noticed of the treatment. One case was cured in three weeks. In another case all symptoms disappeared in about six weeks. The fourth case went from under observation while it was improving, but was not as yet quite well.

Besides the antiseptic effect, the thymol injection seems to promote emptying of the pulmonary cavity through expectoration, and besides to stimulate the lung tissue to the formation of cicatrices.

As an immediate result of the injection a paroxysm of cough and bloody expectoration occur. But in no case did they excite alarm.

In general we may say that the patients bore the injections well, though they usually complained of their producing a bad taste in the mouth, which, however, did not last long.

The only disagreeable feature of the operation, seems to be the dread with which the patients anticipate it. Instead of decreasing, this dread increased with repetition of the injection.—*Deutche Med. Woch.*

VOMITING TREATED BY BLISTERING OVER THE VAGUS.

Dr. M. J. Kenny writes in the *Brit. Med. Jour.:* Some time since I attended the wife of a farmer, and mother of three children, a healthy well-developed woman, aged 32. I found her in the end of the first stage of labor, head presenting, and making fair progress, but suffering from most distressing vomiting, which came on with each uterine contraction. I was informed by her friends that she had suffered from this distressing symptoms in her previous labors, and that on each occasion the vomiting continued, for several days after delivery, to resist all the drugs employed. I delivered with the forceps, and gave four draughts, one every half-hour, containing hydrocyanic acid, bismuth and opium, but without the smallest effect. I then applied a strong fly blister, one and a-half inch by half-an-inch over each pneumogastric nerve at the anterior border of the sternomastoid. In four hours the vomiting entirely ceased, and did not return.

I believe in cases of persistent vomiting, due, as in the case above recited, to reflex causes, and which very often cannot be controlled by medicine taken by the mouth, blistering over the vagus might be more generally tried with advantage.

METHYLENE BLUE AS AN ANTIPERIODIC.

From the facts that methylene blue is the most satisfactory stain for the plasmodium malariæ, whether in fresh blood or in dried specimens, and that when injected into the circulation of various warm- and cold-blooded animals, this dye stains the red corpuscles, and especially colors the nuclei of nucleated red blood disks, Guttmann and Ehrlich (*Berliner klinische Wochenschrift,* September 28, 1891) have essayed to determine whether this substance has any therapeutic action in malarial disease. The scarcity of malarial affections in Berlin, has, so far, permitted experiment upon only two cases—one of tertian, and another of quotidian ague—but the results have been quite satisfactory. In the first case, one and one-half grains of pure methylene blue, in gelatine capsules, were given every three hours, for five doses, beginning ten to twelve hours before the expected chill; in the second case the same dose was given in five hourly administrations, beginning at the same time before the chill. The periodical attacks in both cases ceased within a few days after the beginning of the treatment, but the drug was continued for eight or ten days longer. No unpleasant effects were caused by the drug in either case, excepting in one instance, when mild strangury occurred, after seven and one-half grains were given at one dose. To obviate this, the experimenters administered daily about half a nutmeg, grated—a portion with each dose of the dye—and had no further occurrence of bladder irritation. The urine was stained deep-blue, its quantity was normal or somewhat increased, but albumen or sugar were never found. Fæces contained the coloring matter in reduced form, becoming deeply blue after exposure to the air. These ex-

periments are interesting, and suggest the possible advantage of combining methylene blue with quinine in the treatment of obstinate malarias of the tropics, which, as is well known, are often but slightly influenced by quinine alone.—*Univ. Med. Mag.*

ANTIPYRIN IN HEPATIC COLICS.

In the *Meditzinskoië Obozrenîë*, No. 17, 1891, p. 463, Dr. Abram E. Pombrak, of Romanovo-Borisoglebsk, highly recommends the internal administration of antipyrin as an analgesic in cases of biliary colic. The author details an illustrative case of a stout lady of thirty-six with symptoms of cholelithiasis of six years' standing, the attacks occurring several times a year and lasting for many days. When called to the lady, on the second day of a severe attack, the writer found her suffering from agonizing pain accompanied by vomiting, collapse, and extreme tenderness about the right hypochondrium. For the first four days he tried the treatment by calomel (two grains hourly until liquid stools), morphium (under the skin and internally), amygdalin, leeches, etc. All the measures having utterly failed to afford relief, on the fifth day antipyrin, in ten-grain doses, and natrosalicylate of caffeine, in one-grain doses, were given (in wafers) every two hours. After three doses the pain began to subside; after further five wafers it ceased altogether. On the seventh day the patient was up and about, feeling quite well.

ON DERMATOL, A PROPOSED SUBSTITUTE FOR IODOFORM—ITS USE IN SURGICAL PRACTICE.

Dr. Charles A. Powers, in the *Med. Rec.* writes: In June of the present year Heinz and Liebrecht commended to the profession, for use as an antiseptic powder, a basic gallate of bismuth to which they gave the name "Dermatol."

The remedy is a yellow, fine powder, unaffected by exposure to light and air, and non-hygroscopic. It had been the subject of extensive experimental and clinical investigation at the university in Breslau, having been used in surgical, gynæcological and dermatological practice. It was found to influence the healing process in wounds, ulcers and the like in a markedly favorable manner, and was thought to combine the better properties of iodoform with the decided advantages of being without odor, non-poisonous, and non-irritating. It was recommended for use in all dressings in which we are accustomed to employ iodoform.

In a further communication Heinz gives in detail the causes which led to the experimentation and the manner in which it was conducted. He says, with the truth, that an antiseptic should not only be able to kill germs or restrain their growth, but that it should be free from injurious local or general effect. It should not cauterize or irritate the wound or its surroundings.

Of the dry antiseptics, iodoform alone has thus far been able to prove itself of exceptional value, and to win for itself a permanent place in surgical practice.

He appends a brief comparison between dermatol and iodoform.

a. CONDITIONS IN WHICH DERMATOL POSSESSES ADVANTAGES OVER IODOFORM.

Dermatol.	*Iodoform.*
1. It is not poisonous.	1. It is distinctly poisonous.
2. It is without odor.	2. Its odor is exceedingly disagreeable.
3. It is absolutely non-irritating, it allays irritation.	3. It produces, in many instances, a troublesome dermatitis of the surrounding skin.
4. It can by sterilized by dry or moist heat (this maybe of distinct advantage when gauze is employed).	4. This is not the case with iodoform.
5. It seems, at present, to lessen discharge to a greater extent, and to favor epithelial formation to a great degree than does iodoform.	

b. CONDITIONS IN WHICH IODOFORM$_1$ POSSESSES ADVANTAGES OVER DERMATOL.

Dermatol.	*Iodoform.*
2. There is no reason for believing that it possesses direct effect on tubercular processes.	1. It is at present somewhat cheaper.
3. It is insoluble.	2. Its anti tubercular action seems to be (clinically) fairly well established.
	3. It is soluble in alcohol and in ether.

TUMENOL IN SKIN DISEASES.

Neisser (*Deutsche Med. Woch.*), after prolonged investigation, recommends tumenol as a valuable application for some skin diseases. This substance was discovered by Spiegel, is allied to ichthyol, and like it, is obtained from mineral oils, the name "tumenol" being abbreviated from bitumen and oleum, the former being the source of mineral oils. Occurring amongst the unsaturated hydrocarbons contained in the mineral oils, the impure mother substance is treated with sulphuric acid, when a process of sulphonation under oxidation takes, which results in the production of tumenol—a compound containing two ingredients, tumenol sulphon, and tumenol sulphonic acid. In order to separate these two the tumenol is converted into salts by the addition of a solution of soda, and then extracted with ether as long as the latter continues to be colored. The

ethereal solution then contains the sulphon, the aqueous solution of the sodium salt of the sulphonic acid. The color of the concentrated preparations is black, more dilute mixtures being grey. The solubility in water is considerable, and the odor not offensive. Hitherto Neisser has only experimented with the aqueous solution of the tumenol sulphonic acid, the salts not having as yet been sufficiently tested. The effect of tumenol as a healing application is probably due to its "reduced" action, and also to the readiness with which it can be absorbed, the preparations in use being two tinctures—equal parts ætheris sulph., sp. vini. rectif., and (*a*) water (*b*) glycerine—a powder, an ointment, and a plaster. Tumenol preparations appear most suitable in the treatment of "weeping," moderately severe eczema, of burns of the first and second degrees, and of many forms of itching, whether due to eczema or prurigo. As a surgical dresser Neisser recommends them for both superficial and deep ulceration, for ecthyma due to pediculi, for rhagades, and for scabies. Ulcers of the leg are often rapidly healed. On the other hand, tumenol is no antiparasitic, nor does it affect the patient constitutionally.

THE TREATMENT OF TUMORS AND PLASTIC EXUDATIONS BY OVERHEATING OF THE TISSUES.

Dr. Guirine (*Roussakaia Med.—Journal de Medicine de Paris*, October 25, 1891) proposes the treatment of tumors and plastic exudations by the super-elevation of the local temperature. The overheating is accomplished with a temperature exceeding that of the interior without the production of burns. In this way there is produced a degeneration of the tissue exposed to the heat. The author has treated a young girl afflicted with a tubercular lymphadenitis of the neck, which has given place to suppuration and cicatrization Hot poultices were applied over a salve of white precipitate, and changed once during the day. After about four months of treatment, the tumor had diminished very perceptibly in size, and had become divided into a number of small glandules. The hot applications did not prove in the least painful. After eight months there were left nothing but three small nodules. Fifty centigrammes of potassium iodide were then administered three times a day to dissipate the deeper infiltrations. After ninety-eight days of treatment the recovery was complete.

In another patient afflicted with hard cancer of the neck, the application of heat twice a day diminished by one-half the volume of the tumor, which was divided into many nodules. With the suspension of the treatment the regression of the tumor ceased. The treatment was terminated by a surgical operation.

The author has further seen beneficial results from the application of overheating to tertiary ulcers of the legs and of the hands, and in one case of purulent pleurisy. The action of the remedy is good also in the old affections of acne vulgaris and psoriasis, the hypertrophies of lymphatic glands, chronic rheumatism, etc.

The resorption of tissues and exudates is favored by applying along with the hot dressings solutions of chloroform, ethyl bromide or chloride, balsamic oils, and other substances which dissociate the fats.

MEDICINE.

LYMPH TRACTS AND LYMPH CIRCULATION OF THE SKIN.

Kromayer (*Donats. f. prakt. Derm.*, No. 9, November, 1891) has investigated the lymph system of the skin, and believes that there is a special and completely close system of lymphatic vessels in the papillary layer of the cutis; that this lymphatic system is one of the chief paths in which affections of the skin spread, and one of the chief reasons why most of these affections are superficial. He does not believe that any excessive transudation from the blood vessels can be compensated by absorption through the lymphatic system.—*Brit. Med. Jour.*

ABNORMAL AND SUPERNUMERARY MAMMÆ.

T. J. McGillicuddy (*N. Y. Med. Rec.*, October 10, 1891) describes ten cases of abnormality of the breast: (1) Woman aged 26; left breast only half the bulk of the right. (2) Woman aged 24; at the third month of her second pregnancy the axillary glands filled with milk; a brown areola was detected in each axilla, but no nipple; after labor the flow of milk gave great trouble, staining and soaking the clothes. (3) Woman aged 19; four days after her second labor a free discharge of milk took place, the milk issuing from two large and several small holes in the left axilla. (4) A single lady aged 26; a large supernumerary breast extended from the seventh to the ninth rib on the right side; the abnormal and the two normal breasts all hypertrophied when the

patient was 24 years old. (5) A female infant aged 7 weeks; a large nipple over the sternum, midway between the normal mammæ, and on a slightly higher level; this position is very rare. (6) A single, delicate, neurasthenic woman aged 26; breasts absent, nipple alone existing, as in a man. (7) girl aged 18, single; when 13 years old it is believed that she received a blow on the right breast; shortly afterwards the breast began to develop rapidly, until it reached the size normal in a young woman of 20; the other breast remained undeveloped. An eminent surgeon believed that this condition represented Paget's disease, and advised removal of the breast; at present the breasts are normal and of the same size; menstruation is regular and there is no disease in the sexual organs. (8) A man, aged 46, has a supernumerary mamma, as large as a normal breast of a young woman, on the posterior aspect of the left thigh, just below the gluteal fold; it appears to have been noticed at birth; its lobular structure can be distinctly determined on manipulation; on its surface are large blue veins, but there is no areola on the skin and the nipple is perfectly smooth. (9 and 10) Cases of supernumerary nipples in the male.—*Brit. Med. Jour.*

STATUS EPILEPTICUS.

This was the subject of a paper read by Drs. Trowridge and Mayberry at the recent meeting of the Americam Medical Association at Washington. It commences with an expression of regret that in a recent systematic treaties on medicine it should have been stated that as regards the immediate danger from the paroxysms the prognosis is always favorable. The authors go on to state that comparatively little consideration has been given to the condition outside asylums, but it does not seem to have to occurred to them that therein may lie an explanation of the fact—the inference of course being that the condition occurs but rarely outsids asylume. In other words, as they themselves state in their conclusions, the status epilepticus is to be regarded as the climax of the neurosis. The paper gives particulars of several cases treated by the authors. They consider that the condition consists of two stages—a convulsive one and a comatose one,—the latter being occasionally replaced by a period of maniacal excitement; and that the condition is not accounted for by any demonstrable coarse lesion, and is likely to end fatally. As regards treatment, general anæsthetics, like chloroform and ether, they regard as of only temporary utility, but they may be administered with advantage where exhaustion is imminent, or while waiting for the action of some other remedy which has been given. Bromide and chloral, morphine, nitrate of amyl, and sulphate of atropine are unsatisfactory; but they are of opinion that considerable reliance may be placed upon the hypodermic injection of hydrobromate of hyoscine or hydrobromate of conine combined with sulphate of morphia.—*Lancet.*

ON THE INFECTIOUSNESS OF INFLUENZA.

Dr. H. Poole Berry writes in the *Lancet* as follows: In various articles and reports which have recently appeared in the medical journals with reference to the spread of epidemic influenza, the writers seem to be quite satisfied that this takes place by infection or contagion from person to person. In deference to the numerous high authorities who hold this opinion, I feel bound to admit it as substantially true; but I think there are very many who have had a large experience of the recent epidemics in the less densely populated parts of the country who will agree with me in thinking that, if it be true that the disease does spread from person to person, nevertheless it certainly does not spread by *direct* infection like scarlet fever, measles, smallpox, whooping-cough, etc., but that the infection must take place by some *indirect* means, just as typhoid fever and cholera are known to spread by infection indirectly. In no other way can I possibly reconcile the facts that I have observed, the manner in which the disease has first attacked certain localities, and the way in which it has subsequently spread. I am forced to such a conclusion by the following reasons.

1. Granting that the disease spreads by infection and infection only, then it must be admitted by all, I think, that it is the most virulently infective disease which we know. By this I mean that either a vastly larger number of people are liable to be attacked by this infection, or that the infection itself is much more readily communicable than is the case with any other infectious diseases which occur amongst us. Numerous instances, however, must, I think, be present in the minds of most of us in which isolated cases have occurred unaccompanied by the development of the disease in those who were in immediate contact with patients suffering from the malady. I need, I think, only allude to one or two such instances in my own practice, feeling confident that these will readily recall in the minds of others a similar

experience: (*a*) In the epidemic of 1890, a young man came from London to his home here, developed typical symptoms of influenza the next day, which ran the usual course, and none of the others in the house were attacked. (*b*) Last autumn, when the disease was not epidemic, isolated cases occurred here, irregularly scattered, cropping up from time to time, and an epidemic did not result till the spring of this year. We had this disease, then, present amongst us last autumn, this disease which is capable of spreading like wildfire through a community, and yet no widespread epidemic occurred. (*c*) In my own house, my groom had a typical attack in the beginning of February, 1891, and, with no attempt at isolation, none of the rest of my household suffered at that time, though in the middle of April I had it myself, followed a fortnight later by my cook (though the incubation period is stated to be only two or three days). This showed that two of my household, at any rate, were liable to be attacked, though we escaped when the infection was in the house in February. (*d*) In another house this year, one case commenced on Jan. 7th, another member of the family was attacked on May 5th, three servants were struck down almost simultaneously on May 26th, and on July 6th another member of the family had the disease. When the disease was present in the house, and no isolation was attempted, if the disease be so very readily communicable, why did they not all have it about the same time?

2. During the last epidemic, I especially noticed that in the villages around here some few cases of influenza were present for from seven to ten days before the great bulk of the cases occurred; that is to say, the disease was present in a particular village for a few days, when suddenly a little later a large percentage of the villagers were almost simultaneouly attacked. Why should the infection smoulder for a few days amongst a few people, and then suddenly flare up, and the whole village, as it were, be then *almost suddenly* struck down?

If those who maintain that the disease spreads by infection will admit at the outset that it does not spread directly from person to person like scarlet fever, measles, etc., but by some indirect means which exist outside the human body, then I think we may admit their theory, the ground for discussion and discovery will become clearer, and all must set to work to find out what is the manner of the indirect means by which the infection spreads. This is of the utmost importance from a preventive point of view, for it has always struck me as savoring of the ludicrous to endeavor to prevent an infection—which is known to rush across a continent in a fortnight or so, numbering its victims by thousands—from spreading by attempts at isolation, from the garret to the ground floor. Whereas, if we can discover the manner in which the infection spreads, or the conditions under which it multiplies, then there is a possible chance, at any rate, of finding out some means of holding it in control.

PERIPHERAL NEURITIS IN CANCER.

Dr. Auché concludes a work on the existence of neuritis in cancerous subjects, in the *Revue de Médicine*, October, 1890, as follows; 1. Neuritis can develop, and in fact often does develop in the course and under the sole influence of carcinomatous affections. 2. The situation of the neuritis is very variable, but in general the nerves are the more altered the farther they are away from the nerve-centres. 3. These neurites are in relation with clinical symptoms which one must know to search for in such cases. 4. They are probably due to nutritive troubles and to alterations of the fluids and tissues which take place in the cachectic period of cancerous tumors.

SYPHILITIC HYSTERIA.

Dr. A. Fournier has recently, (*Gazette hebdomadaire de médicine et de chirurgie*) had a patient suffering from hysteria whose origin he attributed to syphilis. The patient was a sailor, twenty-four years of age; in his infancy he had had croup and scarlatina, at fourteen years of age he had typhoid fever, and during his nineteenth year had indulged in alcoholic excess. His father had been killed in an accident; his mother was alive and well. The patient contracted syphilis in December, 1890, and two hard chancres appeared on the penis. Owing to negligence in treatment, mucous patches appeared in May, 1891. In August the patient began to feel stupid and heavy in the limbs; at the same time he began to manifest emotional symptoms and would secrete himself for hours to avoid being ridiculed. One night towards the end of August he was awakened by a desire to urinate; on arising from his bed, he fell down and was unable to move. He retained consciousness, but could not speak, though he gave vent to an incessant inarticulate cry. At the same time the left side of his face and body became paralyzed. In September an iritis of undoubtedly specific origin appeared and the patient began to be troubled with severe headaches at night.

All these symptoms were improved by specific treatment. The patient was last seen in November. He then appeared stupid; the emotional symptoms remained. He complained of a constant pain over the left parietal region. The paralysis of the left arm and leg had partially disappeared, and there was a well-marked sensory hemi-anæsthesia over the left side of the body. Fournier believes that the hysteria had syphilis as its ætiological factor, as all other modes of origin were eliminated by the patient's history. There was no evidence of alcoholism, nervous shock, traumatism, or general or infectious disease recent enough to be assigned as a cause for the hysterical feature of the case. Previous to the patient's advent to the second stage of syphilis it had been impossible, Fournier added, to discover any symptom that could lead one to suspect hysteria.

SURGERY.

OPERATION FOR INTRA-CRANIAL HÆMORRHAGE.

Dr. Stimson showed, at a recent meeting of the New York Surgical Society, a patient, forty years of age, who some weeks before had been, in the course of a quarrel, struck on the head with a club. When first seen he was found to have a marked irregularity at the junction of the parietal bone with the squamous part of the temporal on the left side. Weakness of the right leg with complete paralysis of the right arm developed—it is not stated how long after the accident,—and his vocabulary was reduced to "Yes" and "No," although he could make voluble use of expletives. A diagnosis was made of intra-cranial hæmorrhage following injury, and five or six days after the injury was inflicted he was operated on. There was found to be a fracture of the temporal bone above the ear, but no depression. A fissure ran backwards over the parietal border. No blood was found between the bone and the dura, but the latter was dark in color, and no pulsation was observed in it. On opening it a large clot was found in the subarachnoid space extending back a considerable way. An ounce and a half in all were removed and the flap sutured. There was no immediate improvement in the patient's condition, but the paralysis gradually passed away and the ability to talk returned, although there was still evident impairment of this faculty. The case is a very important one, and its progress is very suggestive. Apparently operation could not be undertaken at once, as the question of possible homicide was pending, but there seems little reason to doubt that early operation in such a case would be followed by rapid recovery. Even after five or six days, the amount of restoration obtained by the operation must be gratifying both to the patient and the surgeon, and it will no doubt become greater as time goes on. One curious thing about the case, is, that no mention is made of fits of any kind, which we should have expected as a result of a subdural hæmorrage such as was present.—*Lancet.*

ON THE METHODS OF STRETCHING OR EXCISING A PART OF THE INFERIOR DENTAL, LINGUAL, AND SUPERIOR MAXILLARY NERVES FOR EPILEPTIFORM NEURALGIA (TIC DOULOUREUX).

Dr. W. J. Walsham writes, in the *Brit. Med. Jour.:* in the article on the various surgical procedures, devised for the cure or relief of trigeminal neuralgia—"tic douloureux"—lately published in the *Journal,* Mr. Horsley in speaking of the operation for stretching or excising a portion of the inferior dental or lingual nerves by the incision through the mouth, states that this operation may "now be said to be very rarely practised." I was surprised to read this, since it is an operation I have performed very frequently during the last twelve years, and I have come to regard it as the simplest, the safest, and the best of the methods of exposing those nerves. Mr. Horsley says, "The great objection to such an operation, is the certainty of the wound becoming septic, and the consequent inconvenience and danger to the patient, not only from the danger of local necrosis, but of general infection." Seeing that the wound communicates with the mouth, I imagine it cannot be denied that it may become septic, but at the same time I can affirm, from an experience of a very considerable number of these cases, that it heals up perfectly in a few days, and generally by the first intention. I have never seen any general infection follow, and in only one case was there suppuration and local necrosis. But this happened to one of the first patients on whom I operated in this manner, and I attributed it rather to my then inexperience of the operation, and consequent unnecessary disturbance of the parts in exposing the nerve, than to any defect in the operation itself. Moreover, my experience of wounds in general about the mouth is, that, as a rule, they heal exceedingly well. I do not think,

therefore, that any fear of septic trouble, local or general, need deter us from choosing this operation, if in other respects it appears superior to others that have been proposed or performed. That it is superior I claim for the following reasons: (1) That there is no external wound or disfigurement whatever; (2) that no muscle or other important structure is divided; (3) that no removal of bone is necessary; (4) that the parotid gland and the articulation of the jaw are not interfered with; (5) that the exposure of the nerves is all that can be desired; (6) that the wound heals readily in a few days, and that the patient, as a rule, may be said to be perfectly convalescent from the time that he recovers from the anæsthetic.

There are some points, however, to which it is important to attend in performing this simple little operation. 1. A clean and free incision should be made through the mucus membrane to facilitate rapid healing. 2. The internal pterygoid should be separated from the bone without unnecessary bruising; and (3) care should be taken not to detach the periosteum from the jaw. As an example of the simplicity and safety of the operation, I may mention the case of a patient on whom I have operated some five or six times through the mouth. I first stretched his inferior dental nerve ten or twelve years ago. He has perfect immunity from pain after each operation; on the last occasion but one, for about eighteen months. On each recurrence of the neuralgia he comes into the hospital, has his nerve stretched, leaves on the second or third day after the operation, and is thus only incapacitated for business for a few days.

I have read over the steps of Mr. Horsley's operation very carefully, and am acquainted with the operations to which he refers; but I confess that after reconsideration of the subject, it still seems to me that the incision through the mouth is by far the best operation. I make this communication since it seems to me a pity that so simple, so safe, and so efficacious a procedure should fall into disrepute.

I have a word or two to say on the method of stretching or excising the superior maxillary nerve, and removal of Meckel's ganglion. In the few instances in which I have operated, I have reached the nerve and ganglion by working through the antrum, chipping away the lower wall of the infra-orbital canal, and trephining the posterior antral wall. I have had no difficulty with regard to the healing of the antral wound. It seems to me that when the periosteum is separated from the orbital floor, and the upper wall of the infra-orbital canal is attacked, there must be some slight risk of injury to the contents of the orbit; whilst, moreover, the antrum may still be opened, but in such a position that it would there be impracticable to obtain a dependent drain.

THE BURIED SUTURE.

In an editorial in the *North American Practitioner*, the advantages of the buried suture are given as follows:

1. It is a permanent suture.
2. It is a suture which does not invite sepsis, as the skin suture does.
3. It is less painful than the skin suture.
4. It produces more perfect coaptation.
5. It is followed by less scar.
6. It is the ideal suture.

From this study it would seem that the use, except in exceptional instances, of the skin (temporary suture), is as irrational as the use of the temporary ligature.

OBSTETRICS.

MATERNAL IMPRESSIONS.

This subject seems to be perennial in medical literature. Dr. Ballantyne and other modern authorities have given reasons why maternal impressions should be taken into account when the causes of monstrosities are under consideration. A paper on a suspected case of maternal impressson was published in a recent number of the *Centralblatt für Gynäkologie*. Dr. Wolff, of Wilhelmsburg, was consulted in October by a patient recently confined, about a malformation in the child. There was defective development of the middle, ring, and little fingers of the left hand, so that the corresponding metacarpal bones each bore a single ill-formed phalanx, with a rudimentary nail. The rest of the child's body was free from any deformity. None of the infant's relatives appear to have been subject to any kind of deformity. The mother informed Dr. Wolff that in the second month of pregnancy she was greatly distressed by seeing a woman who had lost nearly all the fingers of one hand at a fire. There was also ugly scars on the face and neck, but the mother could not help dwelling for months on the injured, fingerless hand. We must not overlook the possibility of coincidence, as burnt hands are not rare, nor is imperfect development of the fingers extremely infrequent. Again, some relative may have had a similar deformity, which his or her relatives had overlooked. Every medical man who has made extensive clinical

researches is aware how very little people know about their nearest relatives. Professor Bertram Windle has recently written on teratological evidence as to the heredity of acquired conditions, and shown how polydactyly at least tends to be hereditary. There are several other questions to be considered before the doctrine of maternal impressions can be established as a sound, scientific theory. Amniotic bands certainly damage many parts of the fœtal body, and the fingers seem particularly exposed to injury from that source. The fœtus is not free from disease of its blood-vessels, which may arrest nutrition and development, especially at the extremities. Lastly, the supporters of the maternal impression doctrine cannot show how psychical influences in the mother may influence the development of the child. Such influences may exist, but, as a rule, monstrosities can be traced to more definite sources.—*Brit Med. Jour.*

FORECASTING THE SEX OF THE CHILD BEFORE BIRTH.

Dr. R. Ross says in the *Lancet* that for many years he has been in the habit of successfully determining the sex of the child from the position in which the mother describes the fœtal movements to be most marked and constant. Most women can, but some cannot, differentiate the locality. In those who can he finds the following rule applies. If the fœtal motions are chiefly and most intensely felt on the left side, predict a male ; if on the right, a female. The following cases from his note-book :

1. S.	Chief site of fœtal motions	left side.	Male birth.	
2. C.	do	do	do	
3. M.	do	do	do	
4. Mac.	do.	do	do	
5. S.	do	do	do	
6. B.	Chief site of fœtal motions	right side.	Female birth.	
7. Sm.	do	do	do	
8. St.	do	do	do	
9. B	do	do	do	
10. Me.	do	do	do	
11. Ma.	do	do	do	

GALEGA AS A GALACTAGOGUE.

Carbon de la Carrierre says: (*Arch. de Toc. et de Gyn.*, August, 1891) Goat's rue is an almost forgotten drug at the present day, although at one time it had a certain reputation as a galactagogue. The author believes that it deserves to be reinstated, as, according to his experience, it has a decided effect on the mammary gland, increasing deficient and restoring suspended secretion of milk.

All physicians have met with cases in which, in spite of every hygienic precaution, the milk becomes less in quantity without any appreciable cause. Poultices of the leaves of the castor-oil plant and faradization of the breast do not give the desired result. Phosphate of calcium, extract of malt, and Bordeaux are often administered. Galega is a useful adjuvant, and, even when used alone, gives excellent results. It is perfectly innocuous, is a stimulant to digestion, and is slightly diuretic in its action.

The aqueous extract is the one to be preferred. One to five drachms should be given daily in divided doses. The amount may be increased if necessary. The drug takes effect in a few hours, but must be persisted in for at least ten days in order to secure permanent results. It may be administered with distilled water and simple syrup, or in mucilage in the form of pills. Fennel and calcium phosphate may be associated with it to advantage. An especially efficacious formula is the following:

℞ Aqueous extract of galega,
Lactophosphate of lime,
Tincture of fennel.....āā ʒij; gr. 40
Simple syrup..... ʒxij; ʒvi.

Four to eight tablespoonfuls a day in water, beer, or milk.

GYNÆCOLOGY.

LACERATION OF THE VAGINA.

Piering (*Centralbl. f. Gynäk.*, November 28th, 1891) speaks, not of the tearing away of the vagina transversely from the cervix, but of longitudinal lacerations confined to the vagina itself. Most authorities attribute recto-vaginal fistulæ to direct perforation by instruments and pieces of bone, or to imperfectly healed lacerations of the perineum. Dr. Piering describes a case where the vagina was torn during spontaneous labor. The patient was a primipara, aged 41 ; the soft parts were very rigid. Instruments were not needed, but the head was delayed at the perineum, so that it was thought advisable to make an incision one inch long in the tough inelastic perineal tissues, on the right side. The parts were watched during the next pain, when a gush of blood escaped from the rectum, the right hand and part of the forearm of the fœtus appearing out of the anus. The arm was replaced, and the child was born without any further damage to the perineum. The tissues around the laceration were much bruised, and union by first intention could not be expected. The incision in the perineum was found to be no longer than it was when made by the operator. The cervix was not lacerated. After thorough disinfection of the parts, the vagina was plugged

with iodoform gauze. On the third day the bowels acted no fæces came through the vagina. During childbed there were two attacks of fever, which disappeared when the surface of the wound was painted with tincture of iodine. When the patient was discharged, a firm and perfect cicatrix had formed; it could not be distinguished on the rectal side.

RAPID EXPLORATION OF THE UTERINE CAVITY.

The report of the removal of the ovaries for persistent uterine bleeding, by Dr. Farcourt Barnes, is received with considerable surprise by J. F. W. Ross (*New York Medical Journal,* October 24, 1891). Dr. Ross is in the habit of forcibly dilating the uterus under these circumstances, and exploring the cavity of the uterus with his little finger. He has yet to meet with the first case of damaged appendages produced by rapid dilatation and exploration. The procedure must be carried out on strictly antiseptic principles. The vagina and cervix should be thoroughly irrigated with a sublimate solution; instruments are to be taken directly from boiling water, and rendered cool enough to handle. The Goodell dilator is the best. The cervix is gradually dilated, and when the limit of the instrument (an inch and a half) is nearly reached, the blades are allowed to fall together again, so as to relieve the tension for a moment and restore the circulation of the part.

When the limit is reached this is also done, and the blades are again separated, so as to make the dilatation as complete as possible. The dilator must be passed beyond the interal os. When this is accomplished the little finger is readily passed into the uterus, and its cavity completely investigated. The uterine cavity is packed with iodoform gauze, and the vagina is filled with the same material. The patient is kept in bed for several days, and the gauze is removed in forty-eight hours. Cleansing douches are then given. By this treatment he has diagnosed cancer of the fundus, sloughing intrauterine fibroids, fungus endometritis and retained placenta. He is firmly convinced that cases of obscure hæmorrhage from the uterine cavity are, in the main, due to the presence of small, almost unrecognizable fibroids. The practice of making irritant applications —such as carbolic acid, iodine, etc.—after dilatation and exploration to be condemned. Gradual dilatation by tents or bougies is not advised.—*Univ. Med. Mag.*

THE TREATMENT OF CHRONIC OVARITIS.

A. J. C. Skene (*Medical News,* June 13. 1891). Many of the cases treated by abdominal section are not much, if at all improved. The cases cured are those operated on when near the menopause; those improved are generally such as have suffered from complicating affections; for example, dysmenorrhea; while the unimproved are the younger subjects in whom the disease was uncomplicated. The indications for treatment are both general and local. The indications for general treatment are to lessen the blood supply and relieve pain by correcting the deranged innervation. This, in the early stage, demands rest in the recumbent position. At the same time general exercise should be advised, either by massage or by gymnastics in the reclining position. The condition of the digestive organs should be carefully watched and relieved by small doses of mercury and a laxative. The saline laxatives are the best. To relieve pain and lessen the hyperæmia the bromide of sodium and fluid extract of hydrastis canadensis are by far the most potential agents; they are given in combination--twenty to thirty grains of the bromide and ten to twenty minims of the hydrastis, three times a day, until the physiological effects of the bromide are noticed in a mild degree.

Sometimes the bromide fails, even in larger doses, to relieve the menstrual pain. In this case ten grains of salicylate of sodium and five of antipyrin, given between meals, answer for some time; others, more especially those markedly debilitated, do better on full doses of aromatic spirits of ammonia, camphor and chloric ether, with small doses of cannabis indica. In the unmarried local treatment should be avoided. Hot sitz-baths, counter-irritation and hot vaginal douches comprise about all that should be employed in young women. In married women any complicating disease should be treated locally. In addition, applications which will relieve the tender and hyperæmic ovaries are applicable. A small tampon, saturated with equal parts of tincture of belladonna and glycerine, applied behind the cervix and permitted to remain forty-eight hours, is useful, and after its removal a hot douche. These are continued for five days, and are followed by an application of tincture of iodine to the vaginal vault. Geod effect has been obtained from the sulphichthyolate of ammonium, five parts in ninety-five of glycerine, applied in the same way as the belladonna and glycerine. The general and local treatment thus briefly outlined gives relief to the more pronounced symptoms.

The pain becomes less and also the tenderness. The general health improves and the pelvic congestion subsides. From this point tonics and laxatives may still be required, but alteratives are also indicated. Iodine and mercury are the chief agents. Small doses of bichloride of mercury, with chloride of iron, when iron is indicated, followed by syrup of the iodide of iron, in doses as large as can be borne, may be administered. These can only be used when the bromides are given up. In place of the bromides, sulphonal is of great value to promote sleep. The treatment is necessarily a long-continued one and requires patience and careful watching.—*Univ. Med. Mag.*

PÆDIATRICS.

DIPHTHERIAL INFECTION OF TRACHEOTOMY WOUNDS.

Dr. Spronk, of Utrecht, (*Centralb. f. Allg. Path. u. Path. Anat.*, 1892, No. 1) has discovered in the case of three children who had been tracheotomised for diphtheria a condition which has not hitherto been described, but which he thinks is far from rare. This consists in an inflammatory œdema of the subcutaneous and fatty tissue around the tracheotomy incision, caused by the invasion of diphtheria-bacilli. He points out that in ordinary diphtheria the bacilli are confined to the epithelial surface and the false membrane, and never penetrate into even the uppermost layers of connective tissue so long as the mucous membrane is free from necrosis. Nor are the bacilli ever found in the internal organs and blood of infected individuals. Nevertheless it has been shown experimentally that these microbes can multiply in the subcutaneous tissues, especially of some animals, guinea-pigs for example. The cases he examined had died a few days after tracheotomy, and although the wound itself was free from membrane, and looked healthy, yet there was a more or less widespread diffuse œdema, without any change in the superjacent skin. This œdema was obviously inflammatory, but there was no necrosis. In two cases it occurred not only in the vicinity of the wound, round the trachea and in the intermuscular tissue, but extended for some distance over the chest and upwards to the supra-clavicular regions. He found by tube-cultures that the serum taken from different parts of the œdematous area contained abundant bacilli, which were almost as numerous at a distance from the wound as near to it. The possibility that they may have multiplied after death was slight, seeing that these organisms require a temperature of at least 20 C. to grow. Other bacterial colonies were produced from the serum, but in one case this yielded almost a pure culture of Klebs' bacilli, and the capability of these organisms to cause this type of inflammation was proved experimentally. Dr. Spronk lays especial stress on the fact that, although of course the infection takes place through the tracheotomy wound, yet its margins appeared natural. This he ascribes to the use of iodoform and the short time that elapsed between the operation and death. The importance of the discovery lies in the additional risk of the rapid absorption of the toxine produced by the bacilli when these are lodged in the connective tissue.—*Lancet.*

NEW ANTHELMINTIC, SANTONINOXYME.

Coppola (*La Union Médicale*, March 26, 1891.) thinks that he has discovered in santoninoxyme, a derivative of santonine, a safe and reliable substitute for this favorite anthelmintic. It was found that animals in which epileptiform convulsions were produced by santonine were unaffected by even large doses of santoninoxyme. Its therapeutic action is sure and certain, and its administration is not followed by any secondary disagreeable phenomena. Santoninoxyme is employed in the same manner as santonine, with the exception that the dose is three times as large.

A NEW TREATMENT OF DIPHTHERIA.

Catuffe, in view of the difficulties frequently encountered in attempts to swab the throat in diphtheritic children (*Bulletin Medical*), thinks that it is better to abandon the use of collutories, and to substitute therefor a remedy which is both sialogogue and antiseptic. His procedure is as follows:

During the day inunctions of fifteen to thirty grains of mercurial ointment are to be made every hour; and, at night, every two or three hours, at the sites of election (the axillæ, internal aspect of the thighs). At the same time frequent washing out of the mouth with a solution of chlorate of potassium, together with a general treatment.

By these means, the author claims to have obtained excellent results, having observed neither albuminuria nor stomatitis. In all the cases salivation was quite abundant.

To Stupefy Bees, some apiarists are in habit of burning in the hives ammonium nitrate, which thereby is converted into laughing gas (N_2O).

HYGIENE.

RECENT EXPERIMENTS WITH THE PNEUMOCOCCUS OF PNEUMONIA AND ITS TOXINE AND ANTITOXINE. THE POSSIBILITY OF CONFERRING IMMUNITY IN ANIMALS, AND EVEN IN MAN.

G. and F. Klemperer have published a memoir in which are detailed some important recent experiments, the practical outcome of which may possibly be of some real therapeutic importance.

The directing idea which guided these German investigators in their experiments was the following: It is known that in most cases pneumonia after having, during from five to seven days, caused grave general symptoms, terminates abruptly by crisis. In the space of a few hours, the temperature falls to its normal level, and even below it, the pulse becomes slower and firmer, and the patient experiences a striking amendment. Now at this moment there has been little or no change in the state of the lungs, which still remain infiltrated with fibrinous exudation, nor in the properties of the pneumococci, which are found in great numbers in the sputa, and retain all their virulence, as can easily be proved by inoculations of animals.

The pneumonic crisis, then, does not depend on any change in the state of the lungs, or in the microbes which have caused the infection. To what, then, are we to attribute it? Only one explanation is possible; the crisis is due to the products of secretion of the pneumococcus, which, by their accumulation, modify at a given moment the soil on which the microbes develop.

In their experiments made on hares, the Klemperers early observed that any nutritive substance which had served as a culture medium for the pnemococci, even if it had been separated from the microbes by filtration, might confer on the animal immunity against the pneumonic infection. The power of this vaccine may be augmented, both in rapidity and intensity of action, by subjecting the liquid for two or three days to a temperature of 41° C., or during two or three hours to a temperature of 60° C.

They then obtained experimental proof that the blood-serum of a hare "vaccinated" against the pneumococcus, may cure the pneumonic infection; it suffices to inject this serum under the skin or into the veins of the infected animal. An intravenous injection of eight cubic centimetres of serum of an animal rendered refractory, practised twenty-four hours after the infection produces a gradual fall in the febrile temperature, and hastens the cure of the animal.

As will be seen, these experiments strikingly resemble those of Behring and Kitasato, who lately announced that the blood-serum of animals rendered refractory to tetanus and diphtheria, is capable of curing other animals of these diseases.

In another series of researches devoted to the study of the cause of the curative action of the serum of vaccinated animals, the German pathologists found that the pneumococcus when introduced into the body of an animal gives rise to the production of a *pneumotoxine* which may be isolated. This pneumotoxine produces a febrile reaction of several days' duration, after which they have noted in the fluids of the animal, another substance, *anti-pneumotoxine*, which has the property of neutralizing pneumotoxine.

The blood-serum of an animal on which immunity has been conferred, contains anti-pneumotoxine, and it is this which seems to forward the cure of the pneumonic infection. In the blood-serum of patients affected with fibrinous pneumonia, they have also found pneumotoxine and anti-pneumotoxine, the first, chiefly during the febrile period of the disease, the second, after the crisis. They claim to have cured the pnemonic infection in hares, by injecting in these animals blood-serum taken from a pneumonic patient after the crisis.

After being assured by experiments made on themselves, that man may support with impunity and without any local and general reaction injections of the serum of animals rendered refractory to Fraenkel's diplococcus, the pathologists above mentioned ventured to experiment clinically, with therapeutic intent, on some patients, affected with pneumonia. Although these trials covered only six patients, the result has been encouraging. In fact, in all these patients, a hypodermic injection of four to six cubic centimetres of serum was followed at the end of from six to twelve hours by a considerable fall in the temperature with slowing of the pulse and respiration.

These experiments are especially noteworthy in that they so strikingly confirm the almost simultaneous and independent experiments of Emmerich and Fowitzky, who claim that they have conferred immunity on the hare by means of hypodermic injections of attenuated cultures of the pneumococcus; but this immunity, they say, is incomplete, and the extract of the organs of the animal has but an incomplete curative action. On

hares infected by pneumococci, *per contra*, full immunity is obtained by intravenous injections of a culture having its entire virulence, but largely diluted. The liquid obtained by crushing and expression of the organs of an animal thus rendered refractory exercises on the pneumonic infection a sure curative action when it is injected under the skin into the abdominal cavity, and especially into the veins of the infected animal.

Large expectations are being entertained by many enthusiastic workers, that researches akin to those above noticed, now going on in many parts of the world—researches the inspiration to which came from Selmi, Gautier, Bouchard, and especially Koch—are destined to be very fruitful in therapeutic results, and that possibly the physician of the future, armed with his hypodermic syringe and his vial of "antitoxine" will find himself master of any and every infection. However, the disappointment experienced thus far in regard to tuberculin should cause us to entertain such expectations with a degree of caution and moderation.—*Bost. Med. Surg. Jour.*

MEDICAL CHEMISTRY.

EUCALYPTO RESORCIN.

This is the name given by Barbey, in the *Bulletin Commercial*, to a reaction product of resorcin and oil of eucalyptus. Resorcin in excess is mixed with oil of eucalyptus, and chloroform is added, and the whole shaken. The clear solution, when poured off, leaves behind a mass of needle-like crystals, having a strong camphoric odor, and which are insoluble in water, but easily soluble in alcohol, ether, and chloroform. This body, on fractional distillation, gives various liquid and solid distillates which have not yet been examined. Naphthol, pyrogallol, and picric acid also give with eucalyptol similar crystalline bodies, all of which have a strong camphoric odor.

QUANTITATIVE ESTIMATION OF PEPTONES.

Riva-Rocci describes (*Centralbl. f. klin. Med.*, November 21st, 1891) a new method, as those hitherto proposed have not been available for clinical work. The greatest difficulty consists in getting rid of the agent employed in throwing down the remaining albuminates, or in estimating the amount of this agent. The author saturates the filtrate from the stomach contents with magnesic sulphate, this salt being used in preference to ammonic sulphate, as it is not decomposed by calcination. Since the magnesic sulphate must be previously dried at 110° C., Riva-Rocci found it necessary to determine the difference in weight between the exsiccated salt at 110° and the calcined salt at 220° when all its water of crystallization has been given off. This amounted to 15 per cent. of its weight. The method consists in estimating (1) the total amount of albumen after it has been precipitated by absolute alcohol; (2) the coagulable albuminous bodies according to Devoto's method; and (3) all the albuminous bodies except Kühne's peptones after they have been thrown down by a saturated solution of magnesic sulphate. The weight of the salt present as ascertained after calcination plus 15 per cent. of its weight is then substracted. The difference between (1) and (3) represents the amount of peptones, and that between (2) and (3) the quantity of hemi-albumoses present.—*Brit. Med. Jour.*

ACETANILIDE AND SALICYLIC ACID.

Dr. Ritsert observed some time ago that the mixture of the above compound with ammonium bromide, known as "antinervin," is remarkable for the fact that the melting-point of the mixture is much below that of its constituents. Mr. H. Prüsse, one of his pupils, has since taken the matter up, and sends a report to the *Pharmaceutische Zeitung*. Acetanilide melts at 114° C., and salicylic acid at 156° C., but antinervin melts at about 80° C. The following are the results obtained from the examination of various mixtures, the lower figures denoting when melting began and the higher when it was complete:—

One equivalent of salicylic acid with	
1 equivalent of acetanilide	82° C.—119° C.
$\frac{1}{2}$ " "	93° C.—141° C.
$\frac{1}{4}$ " "	127° C.—148° C.
$\frac{1}{10}$ " "	139° C.—150° C.
$\frac{1}{100}$ " "	144° C.—154° C.
One equivalent of acetanilide with	
1 equivalent of salicylic acid	82° C.—119° C.
$\frac{1}{2}$ " " "	76° C.— 86° C.
$\frac{1}{4}$ " " "	88° C.—100° C.
$\frac{1}{10}$ " " "	91° C.—104° C.
$\frac{1}{100}$ " " "	107° C.—111° C.

It is evident from these figures that as small a proportion as 1-100th equivalent of either body mixed with the other is capable of materially altering the melting-point, and, obviously, antinervin is as near as possible represented by a mixture of 1 equivalent of acetanilide and a half of salicylic acid.

Two Thousand names of soaps of domestic and foreign manufacture registered at the patent office, are enumerated by the *American Soap Journal and Perfume Gazette.*

NEWS AND MISCELLANY.

THE PAN-AMERICAN MEDICAL CONGRESS IN NEW YORK STATE.

At a meeting of the Medical Society of the State of New York at Albany, February 5, a committee was appointed to co-operate in promoting the interests of the Pan-American Medical Congress. The committee consisted of Drs. S. Walter Suiter, A. Vander Veer, James D. Spencer, Seneca D. Powell, W. W. Potter, D. B. St. John Roosa, and J O. Roe.

AN ARMY MEDICAL BOARD.

Will be in session in New York City, N. Y., during April, 1892, for the examination of candidates for appointment in the Medical Corps of the United States Army, to fill existing vacancies.

Persons desiring to present themselves for examination by the Board, will make application to the Secretary of War, before April 1, 1892, for the necessary invitation, stating the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from whence they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal knowledge, from at least two physicians of repute, as to professional standing, character, and moral habits. The candidate must be between 21 and 28 years of age, and a graduate from a Regular Medical College, as evidence of which, his Diploma must be submitted to the Board.

Further information regarding the examinations, may be obtained by addressing the Surgeon-General U. S. Army, Washington, D. C.

C. Sutherland
Surgeon General U. S. Army.

A Concourse will be held at Rush Medical College, beginning Tuesday evening, March 1, for the purpose of filling the positions of Lecturer on Anatomy, and on Materia Medica, and Therapeutics in the Spring faculty.

The Spring course begins March 31, directly after the close of the regular term, and continues two months with a class of from 250 to 300 students, thus affording the lecturers an excellent opportunity to exercise their skill as teachers.

It is the policy of the College, so far as practicable, to fill vacancies iu the regular faculty from the corps of Spring instructors, Nine of the present members of the regular Faculty have been selected in this way.

The Concourse will consist of twenty minute lectures by each of the applicants before the Faculty, students and local profession, upon subjects pertaining to their branches, which will be furnished by the Professors of Anatomy, and Materia Medica and Therapeutics, a week before the contest.

E. Fletcher Ingalls,
Registrar.

A MORBID VIENNESE CUSTOM.

It appears (says the *Medical Record*) that a somewhat morbid custom exists among the Viennese of having the dead bodies of children and other persons dear to them photographed, and for this purpose the corpse used to be taken to the photographer's studio. The attention of the sanitary authorities having been drawn to the danger of the dissemination of infectious disease by this practice, a decree has been issued by the Austrian Minister of the Interior absolutely forbidding the photographing of corpses in studios open to the public, and the photographing of bodies of persons who have died of any infectious disease by professional photographers, even in private houses. Exception is made of cases in which such photographs may be required for police or medico-legal purposes. In case of persons who have died of non-infectious disease, the corpses may be photographed at the private residence of the deceased, subject to the approval and on the responsibility of the medical official whose duty it is to verify deaths.

MORTALITY OF THE HUMAN RACE.

The annual mortality on the whole earth may be estimated on the ground of recent statistical results at about 33,000,000 of persons, which constitutes an average 91,554 deaths per day, 3,730 per hour, and consequently sixty-two per minute. The average length of human life is thirty-eight years. One-fourth of the human race dies before attaining the seventh year; one-half before attaining the sixteenth year, or in the course of this year. But one person among 10,000 attains the age or 100 years, while one among 500 attains ninety; one among 100 attains sixty. Married people live longer than the unmarried. Among 1,000 persons who have reached the age of seventy years, forty-three belong to the clergy or to the political class, forty to the agricultural class, thirty-three are workmen, thirty-two are soldiers, twenty-nine are lawyers or engineers, twenty-seven are professors, twenty-four physicians. —*Internationaler Phar. General-Anzeiger.*

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CLINICAL LECTURE.

CONGENITAL PHIMOSIS—THACEITIS—SWELLING AT THE WRIST—FUNGUS GRANULATIONS FROM RUBBING OF TOES—INFLAMMATION OF DELTOID MUSCLE—STRICTURE OF THE URETHRA.

By JOHN B. HAMILTON, LL. D., M D,
Professor of the Principles of Surgery and Clinical Surgery, Rush Medical College, Chicago, Ill.

CONGENITAL PHIMOSIS.

Gentlemen:—We have before us a case of congenital phimosis. There are two or three operations which may be performed for the relief of this condition. Perhaps the ordinary Jewish operation is the best when performed on the infant, but it is hardly applicable to the adult. This consists in the retraction of the foreskin, drawing the prepuce through the slit in the instrument and cutting it off; then there is left the mucous membrane covering the foreskin, which is taken between the thumb and finger and forcibly torn until the crown of the glans is exposed. No suture is required in the case, and there is but little hæmorrhage. That is the Jewish operation of performing circumcision. I have seen it performed several times by those accustomed to it.

In a surgical clinic, circumcision is performed sometimes for concealed chancre, herpetic eruption, or adherent prepuce. In this case we have a congenital phimosis and doubtless we will find the mucous membrane pretty thoroughly adherent to the foreskin. I will now take this instrument—it is in fact a tenaculum having a slit in the handle, and with a forceps I will seize the foreskin and draw it over. The skin is now retracted as much as is practicable, while with the scalpel, you will see that we have made a circular incision, involving only the skin. I now slit back the mucous membrane on the dorsum and expose the corona. In this case I am obliged to apply a ligature to a small vessel, and a few stitches to secure the mucous membrane to the skin.

THECEITIS.

I will now show you two cases of theceitis. The first patient, who is obliged to use the arm a great deal during her daily pursuits, has a swelling just over the middle of the ulna, which is soft and fluctuating, but which as I move the arm seems to come from the sheath of the tendon. It is not very painful, but she complains that during certain times the swelling increases in size. This swelling is undoubtedly an exudate from inflammation of the theca of the tendon, what would be in a joint, a synovitis, but as it happens to be in the sheath of the tendon, it is given a different name—theceitis. It is due to a subacute inflammation of the sheath of the tendon, and on puncturing it with the exploring needle a drop of fluid is seen to exude. There is no particular difference between this form of inflammation of the theca and that of a ganglion, except that the ganglion is circumscribed. This is simply a disease of the tendon sheath, by which an extremely lavish amount of exudate is poured out. It requires rest in order to cure the tendon, general puncturing and allowing the excess of fluid to escape, and the application of a bandage. Tincture of iodine is always useful in such cases. A ferruginous tonic would be extremely desirable in this case.

In the second case the marks of the old fashioned scarificator are visible. It shows its teeth on some occasions. If you notice, we have a swelling here along the tendinous sheaths, which is sometimes due to rupture of the annular ligament. It is not so in this case; but we have an enlarged, thickened sheath. It is really a theceitis or inflammation of the theca of the tendons, and of course it occurs in people who are constantly straining

these tendons to their utmost. We must resort to compression as a palliative treatment in this case, using external application of iodine compresses where the projection is pronounced like it is here. We will use a flat cork pressed over the wrist with a bandage tied above. It is no use to resort to leeching or scarification in this stage of the complaint, as it does no good. By strong compression we can make the swelling disappear. You will notice that the patient is hardly able to extend the finger, that is simply due to an inflammation of the flexor tendons which have made them by forcible contraction overcome their antagonists, the extensors.

SWELLING AT THE WRIST.

You will notice here a swelling at the wrist. You see it often in female laboring people, especially in scrub women. We have the same condition of things that I described to you in inflammation of the theca or sheath of the muscle, only at the tendon you see a fluctuating tumor at this point (illustrating). The treatment for this condition consists in making firm pressure over the affected wrist and the application of an elastic bandage the same as you would apply in a case of varicose veins of the leg. At present it will require a compress and roller bandage.

FUNGOUS GRANULATIONS FROM RUBBING OF TOES.

This man has some fungous granulations of the toes at the point where I place my probe, the fourth toe, and also some commencing between the second and third toes. They are due directly to pressure, and the insertion of any ointment between the toes, or a little sublimated gauze that will keep the toes apart, and the surfaces from rubbing together, will be sufficient to cure them ; at the same time, he should have a boot made large enough so that the toes will not be compressed, but remain separate.

INFLAMMATION OF THE DELTOID MUSCLE.

Our next case is a little boy about 9 or 10 years of age, a Bohemian, unable to speak English, and we are unable to get any information either out of him or his mother. We do know that the little boy has some trouble with his shoulder. With this lack of information we are reduced to the objective symptoms for a diagnosis of the case. It is easy to see that the shoulder hurts him, for he cries when I make even slight pressure against it. There is no swelling directly in the shoulder joint, but the swelling is over the deltoid muscle. I notice further that there has been bruising of the shoulder. As I grasp the deltoid I can feel a thickening of the muscular structure, and a little circumscribed swelling at that point. It is possible that an abscess is in process of formation. I find on inserting an exploratory needle into the swelling that it is solid, and doubtless it has come entirely from a bruise. A lady who comes with the child states that the mother has been seen to beat the child severely, and undoubtedly that is the cause of the trouble. It is simply an inflammation of the deltoid muscle and should be treated with chloroform liniment or something of that sort, and a bandage.

STRICTURE OF THE URETHRA.

All parts covered with mucous membrane are extremely sensitive to the influence of cocaine, much more so than other tissues of the body, hence pretty severe operations can be done on the penis under the influence of cocaine alone without the administration of a general anæsthetic. In this case we will inject cocaine locally. I will first endeavor to locate the stricture, which I find both in the spongy and membranous portions of the urethra. You see that a bougie, No. 17, French, cannot be passed. As a general thing I like to test a stricture with a large bougie because small bougies are apt to form false passages. I prefer to pass in this case a cutting instrument, sliding it over one of the small whale bone guides which I show you. For the membranous portion of the urethra I prefer forcible dilatation either by the instrument I show you, or by the better one of Thompson.

For the relief of these strictures there are two principal methods of treatment. One is called internal urethrotomy, or cutting of the stricture internally ; the other, external urethrotomy, or by going directly through the skin. The latter method is applicable in the deep cases which are almost impermeable to the urine, and impassable to an instrument. Internal urethrotomy is practically the same thing as divulsion, or forcible dilatation, with this exception, that in internal urethotomy the blade of the instrument makes a clean, sharp incision, and is more liable to be followed by hæmorrhage than it is with divulsion, which tears tissues apart, and by lacerating vessels prevents hæmorrhage that otherwise might follow. For that reason, I prefer a divulsing instrument for the membranous portion, and a sharp cutting instrument for the spongy portion. A properly made instrument should have a small eyelet for the whalebone guide. It is quite uncertain whether I can pass this instrument through the membranous stricture

or not, for the simple reason that its size prevents it. [Professor Hamilton at this juncture informed the class that Thompson's expander had been taken from the instrument case and could not be found, consequently he had an imperfect instrument to do his work.] I shall try to pass this instrument alongside the filiform guide. You notice I pass in one successively after the other. I do this in order to fill the lacunæ that form in these strictures. By passing the filiform bougies one after the other and twisting the instrument on its axis, it will enable us to pass one of them into the bladder. What is rather unusual, I have succeeded in passing this instrument alongside of the guide and it is now in the bladder. We have the pleasure of seeing the urine flow. It not infrequently happens after divulsion, that we have a flap of membrane torn, which slips down directly in front of the point of the instrument, on reintroduction, and we are simply pushing the point of the bougie against it. I have here succeeded in reaching the neck of the bladder by using an ordinary lithotomy staff which has an almost prostatic curve. I have now succeeded in passing the instrument into the bladder and the urine is escaping. I think perhaps a soft catheter would be a desirable thing for this patient to use for a few hours. I shall now endeavor to make this wound in the mucous membrane as aseptic as possible, by injecting through it an antiseptic solution, filling the catheter with an antiseptic fluid. I shall prevent any infection in the wounded membrane as it passes out. The water will pass out of the eye of the catheter. The anterior portion of the penis can be easily irrigated by this tube. The old-fashioned urethral chill, about which we used to hear so much, has almost disappeared since the adoption of irrigation of the urethra by antiseptic fluids.

GLEET AND BUBO.

Dr. A. Hewson, in the surgical out-patient department of the Jefferson Hospital, prescribed for the bubo the local application of the following ointment:

℞ Ichthyol.....ʒ iv.
Lanoline.....ʒ jss.
M.

For the gleet:

℞ Hydrarg. bichlorid.....gr. ½.
Zinci sulph. carbolat.....ʒ ss.
Acid. boric.....ʒ jss.
Liq. hydrogen peroxid.....f ʒ iiij.
Aquæ destillat.....ad f ʒ vj.
M. Use injection in the morning and evening.

—*Coll. Clin.*

ALOPECIA AREATA AND TRICHORRHEXIS.

By A. BLASCHKO, M. D.,
BERLIN, GERMANY.

Gentlemen: Until a few years ago, the principal diagnostic feature of alopecia areata, in distinction to other forms of disease resulting in a loss of the hair, was that there appeared to be no pathological change either of the scalp or of the hairs themselves which fell out, the latter seeming to be microscopically identical with hairs that fell out under natural conditions. There seemed to be no evidences of inflammation, no formation of scars, and no breaking of the hairs. A few authors, notably, Michelson, called attention to the fragility of these hairs and also to their splitting, but these peculiarities were found so seldom as to have but little weight. In recent years, however, Behrend and Besnier have noticed two peculiar characteristics, namely, the appearance of an air space in the root of the hairs, and the absence of the hair marrow. These appearances do not always occur in atrophic hairs, but nevertheless may be considered as pathogenic evidences of alopecia areata, or at least as a frequent accompanying symptom. These authors also draw attention to the frequency with which they observed a breaking off of the hair close to the scalp—a variation of the disease which Besnier designates *pelade à cheveux fragiles.* Bazin refers to the same as *fausse pelade,* and Lailler as *pedale pseudotondante.* The last two authors have mistakenly attributed the cause of this trouble to the trichophyton tonsurans. A similar, and perhaps the same disease, has been recently described by Nimier as folliculitis tonsurans (microbian), and who observed the disease epidemic among certain French troops. Vaillard and Vincent also have shown microscopically, as well as by breeding and inoculations, the parasitic character of the cases examined by them.

It was somewhat over a year ago that my attention was also called to this symptom of the breaking off of the hairs in alopecia areata, and since then I have found it present in at least seventy-five per cent. of the cases coming under my attention. It seems to be particularly frequent on the periphery of the affected parts, and occurs in a greater or less degree. Undoubtedly we may regard this as a characteristic symptom of the disease.

Three months ago the patient before you came to me for treatment, and I was surprised at the number of broken hairs; indeed, trichorrhexis was the most prominent

symptom of the disease. The entire scalp was covered with innumerable short stumps of hair which looked as though they had been cut close to the scalp with scissors. There were no symptoms of inflammation. The appearance of the case since two months ago has greatly changed. In place of the numerous bald spots, covered with a hairy stubble, you now see the parts covered with young hairs, and exhibiting the typical picture of convalescing alopecia areata. The new hairs can be seen in almost every stage of development—some tender, fine and almost without pigment, others coarser and pigmented, while the hair stumps have greatly diminished in number. I have, however, been able to definitely prove, by this case, that in alopecia areata the hairs break off before they fall out.

One of these hair stumps if epilated and examined will be found to have a normal root, an atrophic and unpigmented shaft, and just below the point of breakage a portion will be found to still contain pigment. The point of breakage is either blunt or else ragged and frayed. Some of the hairs—those which have been affected the longest, will be found to be quite loose, and can be easily lifted out of their sockets. Others not broken will be found nicked, and in some the point of breakage when the upper portion has not yet fallen off will appear as two brooms thrust one within the other, as intrichorrhexis nodosa.

The question now arises as to the cause of this peculiar symptom of the breaking of the hairs.

Behrend and Besnier have sought to explain this abnormal fragility by a drying of them, which, in its turn may be due to circulatory disturbances, or a stoppage of the supply of nourishment to the hairs. Our knowledge of the subject, however, teaches us that a simple drying of the hairs cannot have this effect. The hairs are very hygroscopic, and are able to replace any loss of moisture by the absorption of moisture from the air. This can be easily proven by a simple experiment. Hairs may be placed upon hot plates, or upon a lamp chimney, and allowed to dry, but still one will find it impossible to kink or break a healthy hair—providing of course, it has not been burned. If taken from the hot surface it will soon replenish itself with moisture. Therefore, in order to explain this symptom of breaking off of the hairs, another possibility must be taken into consideration, viz., that while nutritive disturbances may take place, they result in not only a loss of moisture of the hair, but in an entire change of its bio-chemical compositition. The substance of the hair undergoes a physical change. The amount of fats, albuminoids, etc., contained in it are altered.

Here we would call attention to a very remarkable fact, which may be frequently demonstrated upon these diseased hairs, viz., the presence of numerous micro-organisms, which may be found microscopically and by breeding, not only in the shaft of the hair, but in the root, root sheath, and bulb; but in the last named place only when the hairs are very loose in their sheaths. The most varied forms of micro-organisms are found—cocci, small bacilli, round and oval bacteria—and we are led to the thought of a subsequent inoculation, and not a causative condition. This idea is strengthened by the fact that cultures of the sound hairs will remain sterile, while those, the diseased or broken hairs will develope the above named micro-organisms among others—and again when the point of breakage of the hair is placed in the culture, medium colonies will be developed. Now the theory might be advanced, that if morbid processes leading to a total atrophy of the hairs were caused by micro-organisms, these might also lead to the subsequent breakage of the already atrophic hairs. The number of micro-organisms found at the point of fracture, might prove very misleading in tending to confirm this theory. Nevertheless the possibility cannot be entirely discredited, that a certain micro-organism is the cause of the breakage of the already atrophied hairs. On the other hand, the question arises whether or not breakage is primary, and the atrophy secondary. This is, however, not the case, and the course of the disease proves it, and even the hairs that are only kinked, will be frequently found to have lost pigment, and be atrophied.

After all that has been said, we may condense the results of our experiences as follows:

Trichorrhexis is a very frequent, although perhaps not invariable symptom in the beginning of alopecia areata; and there occur cases in which the symptom is remarkably pronounced. Besnier's idea of creating through this symptom a new variation of alopecia arecta, is entirely untenable and incorrect. To what cause the breakage of the hairs may be ascribed, has not been proven. The possibility of a secondary action of a micro-organism cannot be entirely set aside. The entire disease is neither parisitary nor contagious, and differs, therefore, from the *pseudo-pelade* described by Vaillard and Vincent.

COMMUNICATIONS.

A CASE OF MALIGNANT DISEASE OF THE STOMACH IN WHICH GASTRO-ENTEROSTOMY WAS CONSIDERED*

By JOHN B. ROBERTS, M. D.

I desire to briefly report the result of a case in which I was only deterred from making preparation for gastro-enterostomy by the debilitated condition of the patient, but in which the post-mortem findings showed the inutility of such an operation. The delay which prevented me from subjecting the patient to the expense and anxiety of so serious an abdominal operation is so justified by the pathological conditions that it has caused me to present the specimen for examination.

Upon being summoned to another State for surgical consultation, I found a man about fifty-two years of age suffering from great pain in the epigastrium. He was vomiting large amounts of fluid. The temperature was normal, but the muscular weakness was great, and sleeplessness pronounced. The abdomen was distended with gas, and there was a marked prominence in the neighborhood of the left hypogastrium. The patient had suffered for about four years with dyspeptic symptoms, during which time he had been under the care of many physicians. He had recently been treated by lavage, which relieved the pain temporarily, and he had suffered with such obstinate constipation as made the attending physician think that there was some obstruction in the alimentary tract. It was this as well as the excessive pain that induced him to call in surgical aid.

The character of the vomiting, the situation of the prominence in the left hypogastrium, and the general aspect of the case made it very evident to me that it was one of dilatation of the stomach. I gave an opinion that it was very possible that there was malignant disease in the neighborhood of the pylorus; but it was impossible to determine the question because of the distended abdomen, and the diagnosis was hence left undecided. The administration of food by the mouth was stopped entirely, and enemata of peptonized milk combined with whiskey were given every two hours night and day. Lavage was continued to empty the stomach and relieve pain. This line of treatment was continued for about three weeks. The patient's discomfort was relieved, the pain disappeared, the vomiting discontinued, and the consequent reduction of tympany rendered it possible to detect a hard mass below the liver in the median line. The bowels in the mean time had become regular by the occasional administration of cascara. This for two weeks, however, was not needed, because of spontaneous evacuation of the bowels, probably due to the enemata. Miscroscopic examination of the vomited matter showed me that blood was present in the ejecta, and I now made a diagnosis of malignant disease.

At the end of three weeks small amounts of nourishment were given by the stomach. We commenced with a drachm of peptonized milk with a few drops of whiskey every two hours, and daily diminished the amount of food administered by the rectum. Gradually the amount of food taken into the stomach was increased until it reached three ounces every two hours. The prolonged rest during the period above mentioned seemed to have been beneficial to the stomach, so that the small amounts of food given at frequent intervals were digested without pain; there was no vomiting, though the tympany became more or less prominent.

At the time he began to take food by the mouth I told the patient that he had malignant disease of the stomach, and that exploratory examination was proper, with a view of determining whether an artificial opening could be made between the stomach and the intestine, or the growth removed. This was deferred until the strength of the patient should be somewhat improved under gastric alimentation. The patient, however, continued to lose ground, and died about a month after my first visit. When the food given by the stomach reached three and a half ounces he began to have pain.

The autopsy showed, as the specimen makes clear, malignant disease, infiltrating about one-fourth of the long diameter of the stomach, with several nodular masses at the pylorus. The pylorus, however, is sufficiently patulous to admit readily the introduction of a finger-tip. There was, therefore, no marked obstruction. The cardia is much thinned, while the middle portion of the stomach presents the normal thickness and characteristics. An adhesion has taken place between the stomach and the liver at the point where the growth is most marked.

Gastric dilatation had occurred secondarily to malignant disease of the pylorus. The only time at which it seems to me gastro-enterostomy would have been wise was previous to his coming under the care of Dr. H. A.

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Stout, who called upon me for assistance; and it is very doubtful if at any time the operation would have been beneficial. The pylorus, as shown at the autopsy, must have had an opening as large as would probably have been made had the operation in question been performed; and the infiltration of the wall of the stomach for one-third of its length would have made the area for an opening between the stomach and the intestine limited. An opening would have had to be made between the thinned and dilated portion of the stomach at the cardiac extremity and the large area infiltrated with malignant growth toward the pyloric end. This, of course, could have been done, but prolongation of life would probably not have been gained.

The facts that the man was walking about and attending to business and that the tumor presented no external manifestations make it extremely probable that an operation would not have been suggested previously to the time he came under the care of the physician who consulted me, except by an enthusiast.

I present one case partly because of the interesting character of the specimen, and partly as a contribution to a branch of abdominal surgery which is assuming increased importance.

The recent series of cases reported by Dr. N. Senn have been read by me with great interest; but the conclusion has almost been forced upon me that many of them were cases that scarcely justified operative procedure. Perhaps I am too conservative; but may it not be that he is too enthusiastic?

AN INQUIRY INTO THE BLOOD AND URINE OF THE INSANE.

In the *Journal of Mental Sciences* for October, 1890, Dr. J. Smith notes the lessened proportion of hæmoglobine among the insane, this peculiarity being greatest in cases of secondary dementia. It is not particularly marked in melancholia, general paralysis, and epilepsy. In spite of diminution in hæmoglobine and red corpuscles the specific gravity of the blood is increased, indicating abnormal density of the plasma. The quantity of urine is great in general paralysis, reduced in a secondary dementa, about normal in other forms of insanity, and apparently lessened in melancholia. Urinary solids exist abundantly in general paralysis, and are much diminished in secondary dementia, the other forms of mental disease presenting nothing unusual in this particular. Uric acid is excessive in general paralysis, epilepsy and dementia. There appears to be a slight excess of phosphoric acid in epilepsy.

CHRONIC ENDOMETRITIS.*

By J. M. BALDY, M. D.,

Professor of Gynæcology in the Philadelphia Polyclinic; Surgeon to Gynæcean Hospital; Gynæcologist to St. Agnes Hospital.

Of late years it has become the habit of gynecologists to consider almost all endometrical disease as symptomatic, and not an independent lesion. It is certainly true that many pelvic diseases are accompanied by an unhealthy condition of the endometrium; especially in pelvic inflammatory disorders the lining membrane of the uterus is so frequently affected as to have given rise to the supposition that it is either caused by the pelvic disease, or rarely occurs independent of it. In fact, such assertions are frequently made in print and on the floors of our societies. The temptation is strong to accept this theory, which appears at first blush to be so plausible, but which is nevertheless most fallacious. My daily experience is teaching me that endometritis as an independent disease is quite a common disorder, and is at the bottom of many of the discomforts suffered by women. The causes giving rise to this disease are much the same as those which originate vaginitis, and particularly salpingitis—specific infection and post-puerperal sepsis being the most prolific, and giving rise to the bulk of the cases. Oftentimes the beginning of the trouble can easily be traced to a child-birth or to an abortion. The woman has had a slow get up, and will give the history of some fever, or she has regained her usual health very slowly, and possibly not at all; she will have complained of a vaginal discharge since her confinement, when previously she had been free from this annoyance. The history may be that of an attack of specific infection. Sometimes the history in such a case is clear—a sudden appearance of a yellowish vaginal discharge, with swelling of the labia and burning micturition. At other times the evidence of specific infection is not entirely satisfactory, but it is quite notorious that women often become contaminated without giving it any particular attention, or the discomfort has been so slight as to be soon forgotten. In any event, if the disease be neglected and spreads to the cavity of the uterus, it soon spends its force and settles down to a chronic condition. It may or may not extend into

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the Fallopian tubes and cause a salpingitis and peritonitis. Should it do so, as is often the case, the removal of the appendages will not necessarily bring about a cure of the patient. In fact, this is the secret of the failure of laparotomy in many of the cases which are going from one clinic to another for relief. Even if the disease is complicated by pelvic disorders of an inflammatory nature, especially if the two arise from the same cause, it is well to first turn our attention to the endometritis, in which case a laparotomy may at times be avoided. In other words, certain cases, embracing the two diseases, the symptoms from the endometritis may overshadow those from the salpingitis; this is especially true of many instances in which the intra-peritoneal damage has not been very serious. In those cases where the intra-peritoneal inflammation has subsided, and only its products remain, the treatment of the endometrial inflammation, which, under these circumstances, is usually chronic, can be carried out with impunity if ordinary care be taken.

Of course, in the event of there being an acute or even a subacute pelvic inflammatory condition present, great care must be taken not to interfere with the uterus in any way, else an already bad condition of affairs may be made much worse, and even serious. In many patients, in whom there exists post-puerperal septic endometritis or specific endometritis, the disease has stopped short of the tubes, and has not involved either them or the peritoneum. These cases are quite common, and are daily overlooked. The women wander from one doctor's office to another, and finally, when their money is all gone, into the public clinics, seeking relief in vain. It is often a matter of surprise to me that many of them have never even had an examination made, but have been treated for months and years with drugs, or have been advised to use an injection of hot water. The hot water injections as usually given are worse than useless. Just sufficient water at a moderate temperature is used to a cause a congestion of the uterus and pelvis, which congestion is not relieved by the secondary effect of the hot water, *viz.:* the contraction and consequent driving away of the blood from the parts. These women suffer from continual uterine discharge more or less profuse; there is, perchance, a feeling of weight and heaviness in the pelvis, accompanied by backache; sometimes they feel weak and worn-cut. The menstrual function is disordered, being generally irregular and profuse; pain may or may not attend this function. These symptoms exist either alone or in various combinations, the only constant and reliable one being the uterine discharge. A local examination discloses an enlarged and heavy uterus, from the cervical canal of which an unhealthy thickish discharge is oozing. Oftentimes the cervix is eroded, and the mucous membrane of the everted lips, if the lips be everted, bleeds on being touched with a piece of cotton or an instrument. This hæmorrhagic condition is more apt to be present when the disease is still acute or subacute; but, nevertheless, it is at times seen in the chronic cases. In some instances the uterine body is comparatively normal to the touch so far as its consistency is concerned; again, it may be either too soft, or, what is more common, extremely hard, and even almost fibrous in character. These changes indicate that the disease is not altogether confined to the endometrium, but has invaded the structures comprising the uterine wall. It is no uncommon thing to see an endometritis and a metritis coexisting; in fact, in chronic cases it is rather the rule than the exception. The disease is almost always primarily an endometritis, and treatment which will cure this affection will be followed by a cure of the metritis almost as a matter of course. So much is this the rule that I have gotten to look on these two diseases as very much one and the same.

Where this condition of affairs exists—a large and abnormally heavy uterus—there is very apt to be a retro-displacement of the womb sooner or later. Whether or not all displacements which give rise to trouble are originally caused by uterine inflammations, it is a curious fact that it is a very rare thing to find a troublesome retro-displacement without either uterine or pelvic inflammatory diseases complicating it.

For the treatment of uncomplicated endometritis and metritis there are a variety of remedies, some of them quite effective, while many of them are useless, and are applied in a haphazard way. My own preference is to adopt the shortest and surest course of procedure. The woman is put under ether, the cervix is dilated, and the uterus thoroughly curetted; the uterine cavity is then washed out, and an application of Churchill's iodine made to its surface. If there is pretty free bleeding in consequence of those manipulations, the uterus is packed full of iodoform gauze, which is removed in the course of a day or two, as circumstances demand. Ergot may or may not be given by the mouth, the indications for its use being hæmorrhage or an enlarged heavy uterus. Usually, I give

a half drachm of the fluid extract, three times a day for a short period, gradually reducing the quantity until it is dispensed with altogether within about a week.

As to the steps of the operation: The patient is placed in the dorsal position, the dilatation is made with the Goodell rapid dilator after careful antiseptic precautions. I dilate usually only sufficient to introduce and manipulate my instruments easily—from three-quarters of an inch to an inch. Great care is taken to make the curettement a thorough one. All débris can be washed away, and the cavity cleansed by the use of the rectal nozzle of a Davidson syringe. The application of iodine follows immediately, it being applied with a long-nozzled uterine syringe. The patient is now returned to bed, and nothing more is done for a week or two, excepting to give absolute rest, hot water injections, and keep the bowels soluble, together with the ergot as indicated. I have not found the occasion to place a hard rubber drain in the uterus, as Wyle does, nor to pack it with iodoform gauze for a prolonged period, as Polk proposes. I find, if my dilatation has been properly made, that the cervical canal remains sufficiently patulous for the necessary drainage. The uterus will resent in one way or another the presence of a foreign body, and these procedures can only result in just so much more irritation and consequent discharge.

Some patients are cured altogether by this treatment; but, for the most part, in order to secure a thoroughly satisfactory result, treatment must be kept up for some little time after the woman is allowed to get out of bed. It is my habit, in these cases, to make an intra-uterine application of iodine about twice a week for a few weeks, then once a week, and finally to withdraw the treatment altogether; the hot water injection should be kept up twice a day throughout the whole course of treatment. It is not uncommon, where the endometrium has undergone a fungoid change, for the disease to return, and the whole treatment has thus to be gone through with a second time.

Many patients will not submit to this treatment, in which event it becomes necessary to resort to other methods of management. A prolonged course of intra-uterine treatment will, in many cases eventually bring about the same result. I do not maintain that iodine is the only remedy to be used for this purpose, but I have come to use it routinely for the reason that I have found no other drug which would give better results. It is not always advisable to use it in full strength, in which case it may with advantage be diluted with glycerine in the required proportions. Icthyol and all similar substitutes have only proven disappointing.

So much for the uncomplicated cases of endometritis. Where the disease is accompanied by a pelvic inflammatory condition the first question to settle is whether or not an abdominal section is to be performed for the removal of the appendages. If they are not sufficiently affected to call for the operation, and if the uterine symptoms predominate, and are very annoying, I have no hesitation in treating the uterine cavity. A long-nozzled uterine syringe may with safety be passed into the uterus, even in the presence of considerable pelvic disease, and a local application thus made. In these cases the strength of the material injected should be regulated by the amount of inflammation, as a strongly irritating fluid will be much more likely to cause trouble than the mere passage of the instrument itself. When the pelvic disease has been an old one and quiescent I have not hesitated in gently dilating the cervix and curetting the cavity of the uterus, nor have I ever had any trouble follow such procedure. In this class of patients there is an opportunity for the nicest kind of judgment, and if one be skilful and careful in selecting the proper cases the treatment may be followed by the greatest benefit. I am perfectly well aware that this is contrary to the teachings of many gynæcologists of the present day, but my own experience in these matters has opened my eyes to the fallacy of such ideas. If the gentlemen opposing the practice of intra uterine treatment would try it on some of their cases who continue to have enlarged uteri and a vaginal discharge after the removal of the appendages they would soon become convinced of its practical value, even in these cases.

The treatment of endometritis by electricity I have not touched upon, not that I do not approve of it, but because Dr. Massey follows me with a paper on that subject. It is especially valuable in those cases which refuse the above line of treatment.—(*For discussion, see Society Reports.*)

GONORRHEA.

I have found nothing equal to hydrastine in treatment of gonorrhea.

℞ Hydrastine.....gr. i–ij.
Zinci acetatis,
Plumbis acetatis.....āā gr. j.
Aquæ puræ.....ʒ ij.
M. Sig. Use as an injection after washing out urethra with warm water. Internally, alkalies and copaiba.

—*McIntosh, N. Y. Medical Journal.*

METRITIS AS AN INITIAL LESION IN PELVIC DISEASE; ITS COMPLICATIONS AND TREATMENT BY ELECTRICITY.*

By G. BETTON MASSEY, M. D.

The attractive field recently opened to surgical gynæcologists by the discovery that the ovaries and tubes may be amputated without invariably resulting in the death of the patient, has caused an enormous preponderance of current medical literature to be directed toward diseases of these organs. So great has become the furor that little else is heard at our special societies but discussions on the wet specimens thus procured, which are brought in regularly in buckets by certain operators. This singular abundance of pathological material supplied by two organs out of an important group is calculated to make an onlooker who is, fortunately, free from what might be called the operative infection inquire carefully into its reasons. Granting the peculiarly peccant nature of these organs as a justification, it may be asked why resort should invariably be had to amputation rather than to a more conservative operation. It may be that there is such a thing as a wartime in this work, when, as in military surgery in the field, parts of Nature's handiwork are hastily removed that a more thoughtful conservatism would have restored to health.

But it is not my purpose to discuss at present the debatable question of the proper management of inflammatory conditions of the ovaries and tubes; they are merely alluded to at this time because it is my conviction that many ovaries and tubes have recently been removed when the real seat of trouble was within the uterus.[1] In examining for tender spots by the bimanual manipulation, it is exceedingly difficult to differentiate between a sensitive ovary and a tender uterus, and if one's mind is so constituted that the uterus is entirely ignored, and endometritis or metritis unthought of, a mistake is readily made. One operator declared some two years ago that he did not believe there was such a thing as endometritis. Dragging upon the tender uterus, as he did daily, in his endeavor to find salpingitis, he mistook the purport of the pain excited.

In contrast to this position it may be affirmed that inflammatory conditions of the uterus are the most frequent of all the local diseases of parous women and not infrequently found in virgins. More significant still, it may be said to be either the precedent condition or the nidus of many of the most formidable diseases in this locality, such as certain displacements, catarrhal salpingitis, pho-salpingitis, ovaritis, cancer of the cervix, fibrosis, and many other lesser troubles. How great, then, is the necessity for its early recognition and prompt treatment!

The classical studies of this disease found in the books are most instructive, although the pathological conditions described in the several varieties of endometritis are of but little clinical use to us, since we do not often study these cases in the dead-house, and as yet but few specimens have been presented at the societies. Whether the case is one of interstitial, follicular, or polypoid endometrites, it is, moreover, of secondary importance in face of the present apparently well-founded belief that they are all examples of that protean disease of mucous cavities—microbic invasion. The several forms of cervicitis, endocervicitis, endometritis, and interstitial metritis are clinically distinct and largely separable, it is true, but the fact should not be lost sight of that they are all alike microbic in origin, even subinvolution being septic or trauma-septic, and hence are all mere local variations of the same disease.

The recent developments of bacteriology teach us plainly, then, that simple endometritis—a bacterial colonization of the endometral gland—is the primal step in these progressive conditions. Whether the morbific germ is one of common staphylococci of pus or some other organism, it seems clear that to its conquest of the local phagocytes is due the hyperæmia, hypersecretion, and hyperplasia of the glandular substance of the endometrium, which, later, extends to other situations by either direct continuity of structure or by lymphatic absorption. The reason for the peculiar susceptibility of the uterine cavity to such invasions is easily conceived when we remember that the intrauterine mucosa is distinctly glandular—that the endometrium is, in fact, a gland rather than a mucous membrane.

The method by which the uterine cavity becomes the culture-medium of these infections deserves some consideration. On reviewing the conditions present, particularly

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[1] The grounds for this conviction are derived primarily from a number of cases of post-operative pain seen in private practice and at the Dispensary for Women at Fourth and Spruce streets. Many of these cases had enlarged and tender wombs when seen by me, and had either been made worse by the operation or left in an unchanged condition.

the ubiquity of pus-germs in the centres of population, one is disposed to ask why an infection of this region is not universal instead of the exception. The natural, healthy mucus and the temperature would seem to be an ever-present invitation. Why, then, are germs normally absent above the internal os, though so abundant below that point? The answer has never yet been given; but it can be none other than that of a body of sentinel phagocytic cells stationed in the cervical cavity to war upon morbific germs. Remove these sentinel cells, or lower their vitality, and the resistance they present is overcome by the outer hordes.

The ineffectiveness of these vital sentinels in puerperal infection is manifest. By a flank movement or brutal charge the seeds of destruction are planted well beyond the lines. An endometritis results, which is the cause rather than the effect of the subinvolution of the muscular fibres. In the nulliparous, and particularly in virgins, the method of invasion is not so clear, though we do not have to look far to find it. The prevalence of early stages of metritis—in other words, of endometritis— in perfectly pure virgins is a daily result of my inquiries. At sixteen, seventeen, and particularly between seventeen and twenty-three, in this climate, a uterine leucorrhœa is by no means uncommon in weak and delicate girls; and we do not have to adopt the harsh and generally untrue statement of Schroeder as quoted in the most recent work on this subject, Pozzi's *Gynœcology*, that the germs are introduced by masturbation. The condition of the general health of these patients is the real causal factor. The germs are always in the cervix normally unless the hymen be imperforate, and they are enabled to penetrate within the uterine cavity by reason of weakness on the part of the sentinel cells. A girl whose blood is impoverished by inherited weakness, to which is added the many imperfections in our methods of fashionable education, is in but a poor condition to marshal sentinels and defenses against any morbific attack. The logic of this view is sustained by the methods of many rational physicians in dealing with this condition in such cases. Let the blood-making organs once be restored to health, and the invaders, *if not too deeply intrenched*, will be driven out.

At its inception this affection is usually subacute, if we except the more virulent forms of puerperal metritis, and runs its course without material disturbances of temperature, like the analogous affections of the nasal cavity. Even after the disease has extended so far as the Fallopian tubes, with the production of muco-purulent accumulations, the temperature may still be normal. In my experience, an acute stage is lacking, the onward march of the affection being as insidious as it is gradual. Beginning as an endometritis or endocervicitis, the patient is only conscious at first of a leucorrhœa which becomes more abundant and irritating to the vagina and vulva, and should be the sign for active and intelligent interference on the part of her physician, though of late a do-nothing policy has been advocated by some. It has been said by an eminent authority that the womb has its natural secretions, like the nose. That is, of course, true, but it should be remembered that the nasal secretion is not normally muco-purulent; as soon as pus-corpuscles habitually occur in either secretion, the existence of a diseased condition is manifestly proven.

The subsequent stages and the effects of this catarrhal endometritis are natural consequences. Accompanying the hypertrophy of the endometrium into fungoid and cryptose conditions we have a direct stimulation of the connective-tissue cells of the parenchyma. Trophic changes in this situation and general fibrosis of the body of the uterus result. Coincidently, or at a later period, an extension upward along the mucous tract occurs, and salpingitis, ovaritis, or both, add their burdens to the suffering woman. I shall not recount the local symptoms of this conglomerate affection beyond the statement that at various periods in its course we find changes in the quantity and quality of the secretions, erosion of the os from irritating discharges, hypertrophy and tenderness of the cervix and corpus, combined with a reasonable movability of the uterus as a whole. With these facts you are all familiar. On the reflex symptoms some doubt has been thrown of late, but the best proof that pains down the limbs, in the abdomen, and in the back, with or without nervous prostration, are caused by this "irritable" uterus is given by the disappearance of such symptoms as a result of local treatment. The reason for the doubt lies in the lack of neurological training in many gynæcologists, who have mistakenly treated such diseases as hysteria, neuralgia, lateral sclerosis, and locomotor ataxia as mere nervous manifestations of pelvic disease. I have elsewhere reported an instance of removal of the ovaries for pains that were due to an aggravated spastic condition; and the physicians that follow my service at the Spruce Street dispensary recently saw an even more ludicrous error of a well-known

colleague: A woman applied for the relief of a pain in the side in the region of the floating ribs, making the statement that she had been under treatment for it at a neighboring dispensary for several years. The treatment had been directed entirely to the pelvic organs, and much pressure had been unsuccessfully brought to bear on her to consent to a removal of the ovaries. In spite of this treatment her pain was somewhat worse. In glancing at her back I was led to request that the corsets be removed, which revealed a most marked case of scoliosis, with corkscrew twist of the vertebræ. A properly fitting brace gave her a complete relief from pain. Even a slight acquaintance with orthopædics would not hurt gynæcologists; an elementary training in neurology is certainly essential to correct diagnoses in this specialty.

Besides errors of diagnosis it is possible that the present tendency to minimize the effect of uterine disease in causing backache and other neuroses is due to the failure to cure such conditions by removing scar-tissue from the cervix. Failing to cure these cases by cutting out this harmless reparative effort of nature and by removal of the appendages, the remainder of the woman is kept in bed for long periods of time under the theory that the rest-cure was the proper thing after all and that rest was the most essential part of the rest-cure.

Clinical proof of the dissipation of these baneful symptoms by the use of means that combat the initial microbic affection and its nutritional and hypertrophic consequences is the best proof of their correlation.

A recent case will, I think, present this proof in a strong light. A healthy young lady fell a short distance from a hammock, striking the end of the spine. She suffered immediate pain, and two weeks later applied to an intelligent gynæcologist, who treated her for retroversion, and later for inflammation of the ovaries, so far as could be ascertained from the patient. After some early relief the condition became stationary. At this time the case was seen in consultation by Dr. Baer, of this city, with a view to removal of the appendages, which was, however, not done for some reason. Sixteen months after the beginning of the disease the patient entered my private sanitarium in the following condition. Subjective symptoms: continuous, deep-seated scratching pain about an inch and a half above each ovary; a tender pain in the sacrum, and an inability to walk more than two squares without an intensification of these symptoms and great prostration. Objective symptoms: external evidences of perfect health, marred only by coldness of the extremities. Internal examination showed considerable leucorrhœa; uterus apparently small and in normal position, but when elevated on the finger in the posterior cul-de-sac extremely painful. Thinking the case one of posterior parametritis or ovaritis, she was treated by the vaginal galvanic method, in conjunction with general electricity and massage for the incipient nervous protration that was becoming manifest. Considerable improvement resulted, but no headway was made with the peculiar pain in the ovarian regions until it was recalled that nothing had been done directly for the endometritis. The sound, now passed for the first time, showed that the apparently small uterus had a cavity exceeding three inches. An intra-uterine positive application was therefore made, of a strength of twenty milliamperes, and this had the happy effect of checking the so-called ovarian pain permanently. Four subsequent applications of the same kind were made for the control of discharge, and the patient was restored to health and has remained well, now for some time.

This patient had been kept for three months on a lounge by her previous attendant under the theory that this supposed essential of what is called the rest-cure would be of service. Shorn of its institutional control and electricity this fashionable mode of treatment is a two-edged sword that is responsible for more than one case of chronic invalidism. Used with such essentials, including direct electrical applications to the uterus in the class under consideration, these cases in the borderland between the domains of gynæcology and neurology may be permanently restored to health, though he who essays but one part of the treatment will meet with frequent failure and disappointment.

For therapeutic purposes, cases of chronic metritis are divisible into two classes that resemble the divisions made by the late George M. Beard in cases of sexual neurasthenia in the male. In the one class the affection occurs as a purely local disease, the nervous organization of the individual being so robust that it fails to become affected by the local disturbance; in the other class a far less degree of local trouble may be found associated with profound depression and disorder of the nervous system— a disorder that seems greatly disproportioned to the local disease.

The treatment of the first class of cases is naturally entirely local, and may generally

be carried out in the office, when the disease has not yet ascended to the tubes and ovaries. Various modes of treatment have been efficaciously employed, though many are now abandoned as either ineffective or dangerous. I shall limit my remarks to the local use of electricity, first prominently brought forward by Apostoli, whose conclusions have been more than confirmed by my own experience. As in other subacute microbic affections of the glandular membranes, the galvanic current presents a typical alterative action which may be brought to bear directly upon the diseased surface, and by means of applicators that are in themselves innocuous because elastic, easily inserted, and lacking the dangerous piston action of the cotton swab. The contrast with acids or other cauterants that must be inserted by force is very great; no hooking or pulling on the cervix or other harsh methods are necessary, and the local action is, moreover, strictly measurable and controllable. By reason of its greater antiseptic effect the positive pole is usually preferable, though in the later stages of the disease, when the endometritis has eventuated in a hyperplasia, the galvanic alternative method is better than the use of a single active pole. In subinvolution, particularly, the alternative galvanic method within the uterus is quickly curative, accompanied at each treatment by a primary faradic application.

Judging from results, the local electrical treatment seems to act in a threefold manner, each special element of the method varying in usefulness in different cases. One part of the action is a local alterative effect on the endometrium; another results in a quickened absorption of hyperplastic tissue, and still another in stimulation of the muscular fibres to immediate contraction and increased tone. The first action is most important in fungous and hæmorrhagic cases; hence, the positive pole should be used alone, with a duration of some minutes at each application. As the possibility of causing an immediate increase of muscular tone in the uterus increases, the alternative method becomes more valuable; and in recent subinvolution the faradic current alone is usually sufficient.

If at the initial examination of a case, a reasonable doubt is present as to the preponderance at that time of the original metritic trouble, or of a secondary extension into the tubes and ovaries, the intra-uterine method should be proceeded by a more or less prolonged vagino-abdominal galvanic treatment; and in these cases, as well as in the second class here described in which the nervous system is affected, the value of institutional treatment is enormous. By a combination of internal and external electrical treatment, massage, diet, and partial rest, these cases can be almost invariably restored to health, unless pus-cavities are formed—an event that is rarer than some would have us believe. It may take weeks to accomplish these results, it is true; but it is also true that it takes years for the patient to recover health after the performance of a castrating operation.—*For discussion, see Society Reports.*

SUCCESSFUL TREATMENT OF MEMBRANOUS CROUP WITHOUT EITHER TRACHEOTOMY OR INTUBATION.*

By JOHN B. TURNER, M. D.

The class of cases to which I refer are of laryngitis with fibrinous exudation and not complicated by diphtheria. My experience before February, 1891, covering a period of nine years, was to have treated medicinally eight cases, six of which died, showing a mortality of 75 per cent.

The results of tracheotomy in the practice of my medical friends having been so unpromising (all the patients dying), I did not at any time see fit to have the same tried in my practice. As to intubation, my experience is small—two cases, both dying. I condemn tracheotomy and intubation in true croup, as the same objections obtain in both, viz., that the accumulation of muco-pus in the lower part of the trachea and in the bronchi is lost sight of. Paralysis of the posterior crico-arytenoid muscles, preventing dilation of the glottis in inspiration, is a symptom no doubt relieved by tracheotomy and intubation, but the other paramount elements of danger in the case, as pneumonia, capillary bronchitis, accumulation of muco-pus, feeble expiratory efforts preventing expectoration, due to general debility and exhaustion, are *unremedied.*

The treatment I have used since February, 1891, is based upon the allaying of inflammation about the site of the membrane, effecting the separation of the membrane, lessening the formation of new membrane, effectually controlling laryngeal spasm and sustaining the strength. I use asafœtida by suppositories to allay spasm and to give needed intervals of quiet, restful sleep, and consider it a valuable and much overlooked remedy in membranous croup.

For the other conditions or symptoms I used ammonium chloride given in syrupy

*Read before the Philadelphia County Medical Society, February 10, 1892.

mixture without water, as the addition of water makes it unpalatable to children.

In Wood's *Reference Handbook*, in an article written by Dr. Nickles, of Cincinnati, "Wibmer found a very decided increase of the bronchial mucus after hourly doses of eight to fifteen grains of ammonium chloride and other careful observers noticed the same effect. Experiments of Rossbach seem to show a different mode of action. Under the influence of the salt, the tracheal mucous membrane became anæmic and the secretion of mucus gradually ceased. The utility of ammonium chloride in catarrh of the air-passages may therefore depend upon a favorable modification of the vascularity of the mucous membrane, not merely upon a change of the quantity of the secretion." I am of the opinion that Rossbach's view is the more probable one regarding the action of ammonium chloride, and will better explain its beneficial action upon the catarrh accompanying croup.

I will now give the details of the treatment pursued in my last four cases, and advocate it as one simple, humane, and easily applied.

Case 1. On February 16, 1891, I was called to see Sallie B——, aged eleven months, who was suffering from a severe attack of membranous croup. The mother had lost two children on former occasions by the same disease, one in twenty-four and the other in thirty-six hours. Why croup has a predilection for certain families, I am at a loss to know.

I had the child taken to the Children's Hospital, and Dr. Samuel Ashhurst confirmed the diagnosis and recommended tracheotomy, which was refused by the mother. When the child was brought from the hospital to her home I gave the following treatment:

℞ Ammonii chlorid.....3j
Syr. tolutan .....f℥ij M
S. Half a teaspoonful every two hours.

℞ Asafœtidæ pulv.....gr. xvi
Quininæ sulph.....gr. iv
Codeinæ.....gr. ½
Olei theobromæ .....gr. cxxx M
Fiat suppos. no. viii
S. One every four hours.

The child did well (the attack lasting eleven days) and recovered. The patient received whiskey and milk at regular intervals, and was kept in a well-ventilated room. By this treatment the appetite remained fairly good, and the strength was sustained. The same child had another attack on December 18, 1891, and by the same treatment was restored to health. I call this second attack Case 2.

Case 3. John D——, aged eighteen months; attacked on August 26th. Same treatment, and child recovered on the eighth day. The mother poulticed this boy on chest and over trachea, of which action I approved.

Case 4. Harry J——, aged two and a half years; attacked March 6th. Disease lasted one week. Recovered by means of same treatment. This case received larger doses of the ammonium chloride mixture because of his being older than the other children.

There was no atomization used on these cases. *For discussion, see Society Reports.*

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Society Meeting, Feb. 10th, 1892.

Dr. John B. Roberts read a paper on "A Case of Malignant Disease of the Stomach in which Gastro-enterostomy was considered." (p. 405.)

Dr. J. M. Baldy read a communication on "Chronic Endometritis." (p. 406.)

DISCUSSION.

Dr. John C. DaCosta: I think that cases of pure acute endometritis are rarely seen. The cases that I generally meet with are chronic cases in which there is metritis in combination with endometritis and hyperplasia of the uterus. The treatment of acute endometritis should be as different from that of the chronic cases as that between an acute inflammation of the eye or legs and a chronic inflammation of them. In the acute as well as the chronic form injections are of much value. The reason that injections often do not benefit is that they are not properly given; they should not be given with the woman in the incumbent position, in such a way that the water will reach the neck of the womb and distend the vagina, opening out the folds in the anterior walls and washing away the poisonous discharge. In order to do this the patient should be instructed to keep the vulva closed with the fingers of the left hand until the vagina is filled and distended, and then allow the water to escape. This process can be repeated as often as necessary. In chronic cases nothing will do more good than a good free bleeding. Three

to five ounces of blood should be taken, and the woman will often get up off the table with all the pain gone. Another good plan of treatment is by the thermo-cautery burning a hole one-quarter of an inch deep into the cervix. Ten days after such an application the uterus should look entirely different. Dr. Baldy's method of treatment by dilatation and curetting in these chronic cases is one I have used for years, and is of value; for these uteri often have diseased membrane and fungus granulations, keeping up a continual irritation, which the scraping will relieve by removing a cause of irritation and setting up an acute inflammation instead of the chronic one. I should rather hesitate to follow Dr. Baldy's plan of injecting tincture of iodine in the uterus. I think a safer way is to take piece of cotton in the dressing forceps and swab the whole surface with the preparation of iodine. If your use such a preparation as I do, twice as strong as Churchill's tincture of iodine, you will find that there is very little hæmorrhage. The preparation which I use is one part iodine, two parts iodide of potassium, and four parts of gylcerine. This will cause a decided contraction of the uterus; if it does not, give ergot in doses of teaspoonful every hour until the bleeding stops. I do not like the idea of tamponing the uterus. I do not think that is necessary; it is better to stop the bleeding before the patient is left.

Dr. Charles P. Noble: Dr. Baldy's paper discusses a very important subject, and one upon which every practitioner of experience has decided views. Concerning numer special statements in the paper, there is a general concurrence among gynæcologists; but in my judgment the general teaching of the paper is not sound, and if allowed to go to the general practitioner for his guidance, I feel certain that evil results will follow.

It seems to me that Dr. Baldy has gone back ten years to the point where gynæcology was when I was a student; and not only are we led backward, but are given no reason therefor. A word with reference to pathology: A mere discharge from the uterus does not indicate endometritis. We are indebted to Dr. Emmet and others for disapproving the idea that every uterine discharge indicated endometritis. This may come from various constitutional derangements, such as a feeble heart, general debility, phthisis, constipation, or a sluggish portal circulation, and if these are remedied the discharge will disappear. This class of cases must be eliminated strictly when discussing endometritis. Some even go so far as to deny that there is such a disease as endometritis. I have not studied the endometrium microscopically; but, clinically, I believe that there is endometritis. Another important point in the study of endometritis from the therapeutic standpoint is whether the disease is or is not complicated. Treatment which is beneficial in uncomplicated endometritis may be and is dangerous where complications exist. Endometritis is often the forerunner of salpingitis, which is the forerunner of peritonitis. Old chronic peritonitis cases generally have endometritis. We also know that cases of uterine fibroid often have endometritis. It is apparent that the treatment of such cases should be essentially different from the treatment of uncomplicated endometritis. When the endometritis is uncomplicated, I think that treatment directed to the uterus is moderately safe, although even here we may produce complications from intra-uterine applications, and especially from intra-uterine injections. The experience of our predecessors has proved this, and has shown that most cases of endometritis can be cured without treating the endometrium directly. I have supposed that we had heard the last of intra-uterine injections. In the hands of our teachers the practice was found dangerous and was given up. When the cervix is dilated widely, as after curetting, the danger is probably slight; but when done in the office without such dilatation it is distinctly dangerous—how much so any old book on gynæcology will prove.

I regret that the limited time allowed for debate will not permit me to discuss the subject further; but it seems to me that the points presented are very vital ones, and that they have been neglected by Dr. Baldy.

Dr. M. Price: I thank God that I am not a woman, if a woman is to be treated in this way. The question has often been asked, Why is it that we have so much pelvic trouble? I say that the paper to-night answers that question. Every sort of acid and application has been forced into the uterus. It has been burned by the hot iron. It is no wonder that we have endometritis. Why should we not have endometritis with complications extending to the other organs and to the pelvis, requiring removal of the diseased tissues? The same men that advocate this treatment admit that they have had to remove the appendages a few weeks after dilatation.

Dr. Baldy: The treatment which is so vigorously denounced referred simply to uncomplicated endometritis, not to endometritis associated with fibroid tumor or pus tubes, or

any other serious pelvic or abdominal disease. I should treat these troubles as the occasion called for. Where endometritis is uncomplicated, it can be dealt with without the slightest possible bad effect. My cases are put to bed, and kept there until safe from all inflammatory trouble. Intra-uterine injections can be made in one's office with impunity if done carefully. The cervical canal in some of these cases is so patulous that it would admit a tube twice the diameter of the nozzle of the syringe. I use the syringe almost daily, and have not seen the slightest trouble from it.

Dr. DaCosta spoke of scarifying and curetting to produce bleeding. The curette in my hands generally produces that effect. If the bleeding is moderate I do not use ergot. When I use ergot, I give it in fair doses to produce contraction of the uterus. I select the cases which I subject to the treatment described, and I care not if I have gone back ten or twenty years if the treatment brings about the desired results safely. I am continually receiving patients on whom abdominal section has been done, in whom the uterus is large and heavy, and all the old symptoms remain. I scrape the uterus and remove a large quantity of *débris* from some, and in many this gives relief.

Dr. John B. Turner then read a paper on the "Successful Treatment of Membranous Croup without either Tracheotomy or Intubation." (p. 412.)

Dr. Edwin Roenthal: It seems to me extremely strange that such a disease as membranous croup should be so easily remedied by muriate of ammonium and asafœtida suppositories. In a series of some four hundred and twenty odd cases which I have followed and studied, in my own practice and in the practice of my friends, which were not treated by intubation or tracheotomy, and in which the diagnosis is undoubted, but three recovered. In sixty-four cases that I have intubated, fully one-half died. Many of these cases had been previously treated by muriate of ammonium and also by chloral, which I consider a better antispasmodic than asafœtida. Chloride of ammonia has been long used in this disease. It was recommended by Dr. Condie—one of our earliest members—for membranous laryngitis, and in *Watson's Practice of Physic*, edited by Condie, was described the method of its action, which, if I remember correctly, was to defibrinate the blood, prevent the pseudo-membrane from forming, and facilitate the absorption of tissues already formed. If Dr. Turner considers membranous croup one disease and diphtheria of the larynx another disease, he falls into error regarding treatment. If he means to say pneumonia, capillary bronchitis and œdema of the lungs, which are so often complications of croup, succumb so easily to the treatment by muriate of ammonia, or that they will not occur when cases are treated in this way, I think this places him also in error. I have seen so many fatal cases of croup that I cannot believe that true membranous laryngitis can be successfully treated in the manner he describes. I have practiced intubation over one hundred times, and have had fairly good success. But I have not relied upon remedial measures such as have been mentioned.

Dr. M. O'Hara: The easy cure of cases supposed to need tracheotomy can bear a a very different explanation. It may well be in view of the many cases of recovery after the apparent judicial condemnation of the doctor, not depending sufficiently upon the powers of Nature.

Some years ago I reported a case and published it in the *Proceedings* of the County Medical Society, which can be referred to for details (vol. i. p. 21), entitled "Remarks on a Case in which the Necessity for Tracheotomy was Averted by the Systematic Action of Intense Cold exciting Forcible Inspiration." This was a case in which a most eminent throat specialist considered the time gone by for success by tracheotomy, in a case of nasal diphtheria after measles, and considered it would be closed by death in eight hours, and yet recovery under use of ice, and he frankly told the mother afterward that he probably would have finished the case with the knife. Here there was an error of judgment; though all thought there was membranous deposit, there could not have been any. I have known similar cases, and sending for a consultant surgeon in several cases, waiting brought the patient around. The late Dr. Henry A. Smith related at one of our meetings many cases of this kind in a discussion on the topic, and I hope those of us present familiar with the point will relate such cases for instruction. I rise to have this point specially ventilated.

Dr. H. R. Wharton: I agree with Dr. Turner that many cases of croup get well with the simple medicinal treatment, but I disagree with him in regard to the large number of unsuccessful results from tracheotomy and intubation. My experience with tracheotomy is that even in the most urgent cases, many recover. Last year, at the Children's Hospital, 43 per cent. of the tracheotomies recovered. I have used

chloride of ammonia to some extent in the treatment of croup, but in the last few years I have put more confidence in the carbonate of ammonia, and follow the plan of treatment suggested by Mr. Parker, an English surgeon. I combine the carbonate of ammonia with syrup of senega. My routine treatment in ordinary cases of croup, in which the symptoms are not sufficiently urgent to call for intubation or tracheotomy, is to place the patient on carbonate of ammonia with senega and to see that he is thoroughly stimulated. At the same time I believe that local treatment by inhalation of some medicated vapor is of service. I have recently employed the ordinary steam atomizer, in which I use an alkaline solution such as carbonate of soda and glycerine. The atomized solution is used as frequently as every half-hour or hour, according to the urgency of the symptoms. This solution is also useful after intubation or tracheotomy. I believe that many cases of croup do get well if carefully treated and do not come to the point where operation is necessary I think that the use of strychnine and digitalis in the early stages of the disease often prevents trouble later on from cardiac failure. While at times these very urgent cases will get better without operation, yet in my experience this is the exception. Within a year and a half, death has occurred in five cases of croup in which I was summoned to do intubation or tracheotomy, before I could reach the patient. I think it unwise to say that in these urgent cases operation should be postponed, for many cases of croup die suddenly.

Dr. B. Trautman: We should not lose sight of the distinction between catarrhal croup and membranous croup. Most cases of catarrhal croup will get well without much treatment. By keeping the patient warm and giving an emetic, the cure will be effected. In membranous croup the tendency is to postpone operation too long, till cyanosis sets in, and then the patient generally succumbs. The course of treatment which I pursue in membranous croup is the administration in one mixture of bichloride of mercury, tincture of iron, and chlorate of potassium. As an emetic I give sulphate of copper, one grain for each year of the child's age. That will often bring away the whole membrane. If it does not bring it away, tracheotomy or intubation should be done at once.

Dr. Nutt, of Williamsport: This subject has interested me very much. For the last eight or ten years I have done intubation frequently—I think in seventeen consecutive cases—and out of that number there have been only four deaths. I am therefore a strong believer in intubation, and I had hoped that there would have been a more general discussion on this point. I fully agree as to the necessity for intubating early. When I first began the use of this measure, I usually put it off until the last moment, as a last resort. When the lungs are all filled up and the child cyanotic, I do not believe anything will save the child. I cannot see that intubation has any bad effect, and if used early in the disease we can reduce the rate of mortality very greatly.

Dr. John B. Roberts: It seems to me that this is the old story, that the man who never operates is sometimes wrong, and the man who always operates is sometimes wrong. The discussion seems to be a little uncertain because some speakers use the word croup and others the word diphtheria. Whether or not they mean the same thing, I do not know. If I am called in surgical consultation to a child with difficult respiration due to some inflammatory disease of the throat, it makes little difference to me whether some pathologists call it croup and some diphtheria. I call them all diphtheria, and advise the attending physician to report the case as diphtheria to the Board of Health. Eight or ten years ago I made up my mind that in all cases of diphtheria where there was dangerous difficulty in respiration, my duty was advise tracheotomy, and to do it. That was before the time of intubation. I did tracheotomy over and over again, and though I never saved a patient, the relief of the patient was so great that I never regretted the operation. I believed that in all such cases, where there was dangerous cyanosis, my duty was to open the trachea. Since intubation has been revived by Dr. O'Dwyer, I have adopted that as the primary operation and reserve tracheotomy for a later procedure. To see a child suffocating to death and withhold your hand, is almost as bad as saying that you will not use the stomach-pump even though you know that the person has poison in the stomach. Of course, I do not advocate intubation or tracheotomy in cases where the child is dying from the diphtheritic poison and not from obstruction in the larynx. A few weeks ago I was called in consultation to see a child. The case had previously been seen in consultation by another gentleman, who said that nothing could be done. I was called and introduced an intubation-tube, and in a few minutes the child was breathing comfortably. The tube was vomited out, however, but the relief which he had experi-

enced was so great that the child permitted me to apply the tube again without struggling. He subsequently wore the tube about two days, and is now well. We must select our cases for tracheotomy or any other operation.

Dr. John C. DaCosta: It is not strange that such brilliant surgeons as the last speaker advocate tracheotomy. But what is the mortality? Some ten or more years ago I collected and analyzed twenty-four or twenty-five hundred cases of tracheotomy, and the result showed that only about 24 per cent. recovered. But one reference has been made to-night to the old-fashioned method of using emetics. Nothing will dislodge the membrane quicker in croup than an emetic. You may use ipecac or sulphate of copper, but one of the best is the yellow sulphate of mercury, which latter, I think, has more than a simple mechanical effect. In true croup there is nothing equal to the internal administration of mercury, which may be given in the form of the mild chloride, or of the bichloride or the old-fashioned blue pill. Another point is the enforcement of sustaining treatment. If quinine is used in suppositories, it should be in the form of the bimuriate or bisulphate, or the sulphate mixed with tartaric acid, so as to insure its being dissolved. Anodynes may be needed to quiet spasm.

Dr. John B. Deaver: As has already been said, each case has to be treated on its own merits. There is much to be accomplished both by tracheotomy and by intubation in cases of true croup. My experience, however, has been that in many cases the introduction of an intubation-tube occludes the larynx still further and increases the child's suffering; in those cases I do tracheotomy. I think that these operations are better applicable to cases of croup proper, and I am not in favor of doing them where there is much depression, as occurs in true diphtheria. I cannot agree that all cases of croup die an easy death even when the tube is employed. I have seen them strangle as much after intubation or tracheotomy as before. The operation usually does give relief, but the inflammatory process may extend further down, and the symptoms of obstruction may renewed. I believe strongly in the use of mercury in these cases in order to get its constitutional effect. The bichloride acts quicker, but it is more apt to irritate the gastro-intestinal tract. I believe that there is a difference between croup and diphtheria. I do not believe that they are one and the same disease. The one is local and the other is constitutional. This subject is a very interesting one, but I do not see how we are to instill into the minds of any of the cases which should be intubated and those in which tracheotomy should be done. This question must be judged by the experience of the operator.

Dr. W. S. Stewart: The Doctor did not make a distinction between the true membranous croup and what is known as spasmodic. The latter can be relieved by emetics and counter-irritants, but in true membranous croup we need something more than emetics. I agree in regard to the use of the remedies to which reference has been made. I believe in calomel, or mercury in other forms. I have been to many operations for tracheotomy, and have seen some cases when the operation was performed, where I believe I should have still hoped for recovery without an operation. It is hardly fair to record such cases of recovery as a result of the tracheotomy. On one occasion I went three times to one case to assist in performing tracheotomy, and every time we were refused the privilege. Death was confidently prophesied by the attending physician, but the child recovered.

On another occasion I was attending a child where I feared death was going to result, and I advised the family to call in consultation a gentleman who intubated. During the interval of sending for a doctor and his arrival the child improved; still, I asked the doctor if it was a good case. He said he regarded it as a good case for intubation. I told him to put in the tube, and turned the case over to him. On the second day the child was dead. I do not say that we should never operate or never use a tube, but I do say that those who are enthusiastic in regard to operations are often careless in their zeal to press the proper treatment. They do not pursue the medical treatment as perseveringly as they should.

Muriate of ammonia by itself is very hard on the stomachs of children, but a good combination is chloride of ammonium with chlorate of potassium and syrup of senega. I often combine with this, syrup of squills, ipecac, and tolu; I also administer quinine by the mouth in the form of the tannate. This method often has a very good effect in arresting the development of ordinary membranous croup, when given in large and frequent doses, and the expectorant has the effect of absorbing the membrane already formed.

Dr. G. Betton Massey: There is a therapeutic item to which I have often wanted to direct the attention of general practitioners. During the ten years that I

spent in general practice, I invariably prescribed insufflation of powdered sulphite of sodium in those cases of diphtheritic sore-throat with general systemic disturbance that seemed to be the first stage of diphtheria. In all these cases the membrane disappeared in from twelve to twenty-four hours, and it was a curious fact that in these ten years I did not see a bad case of diphtheria. Whether these membranous sore-throats were of that nature, and were arrested, I am of course uncertain. The powder was insufflated through a paper roll every half-hour, the paper being burnt after each insufflation to prevent the wrong end being subsequently used and infecting the nurse.

Dr. Daniel Longaker: The theory which best fits the facts in these cases is that most of these cases are diphtheria, and that we have either a primary laryngeal diphtheria or a secondary laryngeal diphtheria. It often happens that a child is taken with membranous laryngitis and two or three days later the membrane will appear in the fauces. Diphtheria is primarily a local disease, with, later, general manifestations. It seems to me that the local disease in the fauces is the point of invasion, and a poison is developed and absorbed with such serious effects. I do not think that any one method of treatment of croup can be maintained. Every case must be treated on its own merits. I have found the peroxide of hydrogen very efficient when used as a swab or as an atomized solution. I have used it in a number of cases in the past three or four months with satisfactory results. I do not advocate exclusive medicinal treatment, or exclusive treatment by intubation, or exclusive treatment by tracheotomy. Each method has its own field of application.

Dr. Rosenthal: I have used the peroxide of hydrogen for over a year. Of the kinds obtained in the markets—manufactured by Charles Marchand, Rosengarten & Sons, and Merk—I find that of Merk is the best. At first I used it diluted, but gradually increased my strength of solution until now I use it absolutely pure. I apply it in membranous laryngitis in the form of a spray by means of an atomizer quite copiously, and when the membranes are visible the applications are made direct with probangs of cotton; my applications are made hourly. My remedial treatment is essentially antiseptic, mercury being used fearlessly. I also use stimulation freely—as, for instance, in a child of four years I gave as much as a gill of brandy during twenty-four hours. I firmly believe that my success in the treatment of diphtheria, whether it be of the larynx or fauces of the nose, is based on this antiseptic treatment; and in peroxide of hydrogen I think we have a most potent means of applying it. I attribute my success to it, for I believe, while diphtheria is a constitutional disease, the presence of the membrane hastens the absorption of the poisons and produces septicæmia and toxæmia; and in the peroxide of hydrogen we have a cleansing agent which quickly modifies, removes, or alters these conditions of things. In the last epidemic I have treated all forms except of the larynx, with but one death, and that one was in a rhachitic child. There is one point that I wish to place myself on record as against, and that is the indiscriminate use of emetics in membranous laryngitis; I believe it is wrong in theory, wrong in practice, death is hastened by their use, and I have yet to see one case benefited by their use. I believe that diphtheria and croup are clinically the same whether the disease begins primarily in the larynx and extends upward, or in the pharynx and progresses downward. The youngest case intubated by me was four months and twenty-seven days, the oldest five years and six months; in all my cases peroxide of hydrogen being freely used,

Dr. DaCosta: I understood that the discussion was on croup, and not on diphtheria. The mode of onset, the symptoms, and the results of the two diseases are entirely different. Take a few points of differential diagnosis.

In croup the attack is more sudden, and the patient recovers more rapidly. In diphtheria the patient does not recover fully for weeks, and the attack is apt to be followed by paralysis, which we do not find in croup.

Diphtheria is contagious; croup is not. Croup is found in isolated cases; diphtheria attacks whole families.

Dr. DeForest Willard: While there are such wide differences of opinion in regard to the pathology of these diseases, it is not strange that there should be these marked differences as to the methods of treatment. Some of the speakers, perhaps, refer to one disease, while others refer to another. We all recognize that mild cases get well without much treatment, but there is another grade of cases which will die, whether treated medically, or by intubation, or by tracheotomy. Reliable inferences cannot be drawn from a small number of cases, and even in a larger numbers we may all know that we may have a hundred successive case of recovery in a certain disease, while all of the

next ten may die. This is especially true in membranous croup and diphtheria. I am confident that I have saved a good many lives by tracheotomy, but I have also lost many. Yet the comfort secured to the patient has amply repaid me, even though death has subsequently taken place.

DR. TURNER: I was led to write this paper from the fact that I knew that certain cases of spasmodic laryngitis were intubated and reported as cases of recovery from croup. The treatment which I have mentioned will decide the question whether the case is one of spasmodic croup or not. I also employ calomel, and use quinine in the form of the bisulphate in suppositories. It takes the membrane three or four days to be separated. It cannot always be removed by an emetic, but if you get rid of the spasm you give a great deal of relief. Asafœtida has not been used before in croup. I do not say that intubation and tracheotomy are of no use, but where the membrane is below the trachea and in the bronchial tubes, the case cannot be relieved by these measures. The treatment which I advocate gives the child sleep, rest, and nourishment. Take a healthy child and treat it with emetics and other things which have been mentioned, rousing it up every hour to spray its throat, it would take a good constitution to stand that. Croup is not a very common disease. And in my paper I have referred not to diphtheritic croup, but to membranous croup.

In regard to the employment of calomel, I will state that I employ a purgative dose in the beginning of the treatment, if constipation exists, to arouse secretions, and do not use it for its supposed action to dissolve the membrane.

TREATMENT OF CATARRHAL FEVER.

Dr. V. Lockhart writes in the *Atlanta Med. Surg. Jour.* that this disease embraces two stages, the dry and the moist, and the indications for treatment are somewhat different in each.

To relieve the fever and coryza of the first stage antifebrin is a good remedy. It may be combined with quinine,

℞ Antifebrin.....gr. viij—x
Quinine.....gr. v.

M. This will generally insure rest and a moist skin.

A purgative,

℞ Hydrarg. chlor. mitis.....gr. v.
Ipecac.....gr. j.
Rhei. pulv.....gr. viij.

M. One dose, to be followed by a dose of Epsom salts or castor oil if needed.

Order a bowl of hot water, add a few drops oil of turpentine; let the patient inhale the vapor, a shawl or blanket thrown over the head to confine the steam. This often affords much relief. If the throat be sore, apply turpentine to the fauces with a swab.

After the purgative has acted give,

℞ Tinct. aconiti rad.....5j.
Vini antimonii.....5ijss.
Spt. ether. nitros.....5vj.
Liquor ammon. acetatis.....q. s. ad. 5jv.

One-half teaspoon- to teaspoonful every two to four hours as indicated. Children four to five years of age twenty drops. Opiates are not good for this stage, but if there is much restlessness, a dose of Dover's powder may be given. Antikamnia is better. Mustard should be used as a counter-irritant. One part of ground mustard to two of flour. It should be applied frequently during the disease, and when the mustard is not on, a poultice of wheat bran or cloths wrung out of warm water, and over it a layer of oiled silk. Quinine in moderate doses three times a day. The temperature of the room should be kept pleasant. Under this treatment the cough will become loose, fever will subside, and dyspnœa and soreness of the chest cease in a day or two. Then give,

℞ Syrup scillæ,
Syrup senagæ,
Syrup tolut.
Tinct. opii. camphorat.....aa 5j.
Ammonii chloride.....5ij.

M. Sig.—Teaspoonful every three or four hours. Digitalis comes in well, and it may be added to the syrup as indicated.

In small children prompt and efficient measures are often needed to relieve the dyspnœa and other threatening symptoms. Give fluid extract ipecac in doses sufficient to insure free emesis. This may be necessary at intervals for several days, but it must not be given so as to keep the child nauseated, as this interferes with the measures of support, which are important, especially if the child has pertussis. In this disease we must support the strength by using stimulants and rich, nourishing food, and they are indicated early. Besides the usual treatment indicated above, the following is a good prescription for *whooping-cough:*

℞ Ext. cannabis indicæ.....gr. xv.
Ext. belladonnæ.....gr. viij.
Alcohol
Glycerine.....ad 5jss.

M. Sig.—Four or five drops to a child one year old; one of two years old, five to eight drops three or four times a day.

SELECTED FORMULÆ.

PASTE FOR PRURIGINOUS SQUAMOUS ECZEMA.

In the treatment of this affection, C. C. Vanderbeck has obtained excellent results from the local use of the following paste:

℞ Oxide of zinc.....grammes 9.60.
Gelatine,
Glycerine.....āā " 15.00.
Water..... " 25.00.
M. Sig. Apply and cover with thin linen.

—Journal de Médecine de Paris, January 31, 1892.

SOLUTION OF ERGOTINE FOR HYPODERMIC INJECTION.

The following solution, according to Biedert, is an excellent one, as it lacks irritant properties and is not easily decomposed:

℞ Ergotine.....gramme 1.
Distilled water.....grammes 5.
Crystallized phenic acid..... " 0.01.
M. Sig. For hypodermatic injections.

—Journal de Médecine de Paris, January 31, 1892.

TREATMENT OF PITYRIASIS VERSICOLOR.

In the treatment of this disease, Besnier recommends a medicament that will first produce desquamation and afterwards a cutaneous irritation. He advises: (1) Frictions, morning and night, with black soap, or better, with pumice soap; (2) the substitution of these measures by the application of the following ointment:

℞ Precipitated sulphur.....grammes 10.
Vaseline..... " 90.

—Le Bulletin Médical, January 31, 1892.

OINTMENT FOR MARGINAL EXFOLIATIVE GLOSSITIS.

Besnier recommends the following:

℞ Chlorhydrate of cocaine.....gramme 0·05.
Balsam of Peru,
Boracic acid.....āā " 1.00.
Vaseline.....grammes 40.00.
M. Sig. For local application twice a day.

—Le Bulletin Médical, January 31, 1892.

ANTIASTHMATIC SOLUTION.

The following prescription is recommended by Huchard in the treatment of asthma:

℞ Iodide of potassium,
Tincture of lobelia,
Tincture of polygala,.....āā grammes 10.
Extract of opium..... " 0.10.
Water..... " 900.
M. Sig. A teaspoonful, night and morning, in a little water. The addition of opium increases the tolerance for the iodide. The potassium salt can be replaced by the sodium iodide.

—Le Bulletin Médical, January 31, 1892.

CARDIAC DILATATION.

For cardiac dilatation, with slight congestion of the lungs, due to rheumatism, in a man, 37 years, Prof. Da Costa gave the following treatment (*Col. and Clin. Rec.*):

℞ Tinct. digitalis.....gtt. x.
Tinct. capsici.....gtt. j.
Tinct. cardamom.....ʒ j.
M. Sig. Three times a day.

And two or three times a week give calomel, gr. j. in the evening, followed by a saline cathartic in the morning. The diet is to be chiefly of meat, with the use of a moderate amount of alcoholic liquors.

PRURITIS VULVÆ.

The wash described below has been useful to many of Dr. Bullock's patients, who have suffered from pruritus vulvæ:

℞ Aluminii nitras.....gr. xxiv.
Aquæ.....ʒ iv.
M. Sig. Wash the parts once or twice a day and use as a vaginal injection in the same way.

—N. E. Med. Monthly.

ACUTE TONSILLITIS.

Dr. M. A. Martin (*Lo Sperimentale*, No. 21, 1891) speaks highly of the following:

℞ Acid carbolic, } .....āā gramme 1.
Camphoræ, }
Glycerin, } .....āā grammes 50.
Aq. destillat., }
Three or four applications a day.

ABORTIVE TREATMENT OF CORYZA.

For the aborting of an acute coryza in the early stages, Capitan recommends the insufflation of the following powder into each nostril:

℞ Salol.....gr. xv.
Acid. salicylic.....gr. iii.
Acid. tannic.....gr. ii.
Acid. boric. (pulv.).....ʒ i.

The treatment should not be continued for more than half a day, as the carbolic acid set free from the salol will injure the nose. After this powder is employed one composed of powdered talc and boric acid may be employed, or the following may be used in place of any of those given, and is equally satisfactory and more safe:

℞ Pulv. talc.....gr. lxxv.
Antipyrin.....gr. xv.
Acid. boric. (pulv.).....gr. xxx.
Acid. salicylic.....gr. iv.

A pinch of this may be frequently used without the disagreeable symptoms caused by the first prescription given.—*La Médecine Moderne, November 12, 1891.*

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LEADING ARTICLE.

SHALL THE UTERINE ADNEXA BE REMOVED TO PREVENT PREGNANCY? A QUESTION OF ETHICS.

In the progress of abdominal surgery the operation for the removal of the uterine appendages has been so perfected that in the hands of a competent surgeon it is practically without danger, unless these organs contain pus or other septic fluid. This fact is now generally known by the laity. It is also known that women who have had their Fallopian tubes and ovaries removed do not bear children, notwithstanding that in a vast majority of instances the sexual appetite remains unimpaired. Hence, the question has arisen as to whether the removal of the uterine appendages shall be practised for the sole purpose of preventing pregnancy.

There can be no question that pregnancy is not desired by many women, that this feeling is becoming more general with the progress of civilization, and that measures for the prevention of conception will become more eagerly sought. The grave risks to health and life that women run to avoid having children, by procuring abortion, whether this be merely to avoid the trouble and expense of rearing their offspring, or to prevent disgrace, is sufficient evidence of the drift of this matter at the present time.

These facts have led thinking men to wonder how long it will be until it will become prevalent for gynæcologists to be asked by women to remove their ovaries for the sole purpose of making pregnancy impossible. In the REPORTER for November 14th, 1891, Dr. Todd states that a woman consulted him for that purpose; similar examples are not only known to us, but also where the operation has been performed, and we have reason to believe that more of this kind of work is done than is commonly thought.

It is time that the profession considered this matter and made known the ethics governing it, so that no one should err through supposed ignorance. There is certainly a

nice point to determine how far an individual shall have the liberty of wilful mutilation—whether women shall not be prevented by law from such an act as suggested. Certainly, in so far as the profession is concerned, the operation for the sole purpose of preventing conception is malpractice, just as certainly as is the operation of abortion.

No operation in surgery has done or is doing more good for suffering humanity than that of the removal of the uterine adnexa for disease. This makes it only the more important for the welfare of sick women, and for the good name of the profession, that the operation shall not be brought into disrepute by employing it for unworthy and unjustifiable purposes. This matter cannot too soon receive serious attention. The fact that oöphorectomy is attended with so little danger to life, that the possibility of conception is permanently removed, and that the sexual appetite and full enjoyment of the congress remains in most cases, seem to render it inevitable that the women who now would seek abortion would not be long in deciding, on the one hand, between the immediate removal of the annexa and, on the other, the anticipated operation or operations of abortion. Moreover, that many who now resort to the comparatively harmless, conventional, though frequently inefficient means to prevent maternity, would prefer the permanent and absolute preventive is beyond question.

THE TREATMENT OF BASEDOW'S DISEASE.

The therapy of Basedow's disease is one of the most difficult and thankless problems which the practising physician of to.day is called upon to solve. While, fortunately, it is an ailment comparatively rarely met with, it is seen with sufficient frequency to cause the practitioner vexation and trouble, so that a glance at the most rational methods of treatment now advanced will at least place in the hands of our readers one more weapon, which they may have the occasion to use against this malady.

It is well known that that the so-called "nervines," as well as those remedies influencing the vaso-motor system, are entirely without avail in this disease. Veratrine, which has been praised so loudly, when given in fractional doses only causes passing lessening of the excitability of the medulla oblongata. Equally inefficacious, as regards permanent effect, is antipyrine. Digitalis, since it increases the blood-pressure, is entirely contra-indicated. More confidence seems to be placed, both at the start and at the height of the disease, in hydrotherapy, especially when associated with electrotherapy. This, at least, gives the most satisfactory results, and seems based on rational grounds, especially when accompanied by an internal treatment with arsenic and the bromides.

The therapy of Basedow's disease, based upon these lines, is described by Dr. Jaccond in the *Revue de clin. et de thérap.*, and has since been laid down in a similar way in a recent issue of the *Lyon Médicale*, and the *Deutsche Med. Wochenschrift*, and from these sources we sum up the treatment as follows:

1. *External therapy.* In cases of normal, as well as increased arterial tension, and, indeed, in most instances, even when a condition of asystolia exists, hydrotherapy is well borne. In sensitive patients, this should begin with tepid shower-baths of short duration, which should be gradually increased in duration and decreased in temperature. In such cases where douches are not well borne, they should be substituted by sponging. In anæmic cases, this treatment should at once be instituted, care being taken, however, that the cervical region is not included in the douche.

Hydrotherapy lessens the nervous excitability and also the quickened action of the heart.

When menstrual disturbances exist, Beni-Barde recommends cold hip-baths, warm or cold foot-baths, and uterine douches. During the course of the hydrotherapy there should be daily applications of the constant current in the course of the vagi nerves and at both sides of the neck. These electrical applications should be of short duration and of gradually increasing strength. Vigouroux

has suggested that the galvanic and faradic current be used alternately, and his method has certainly been crowned with considerable success. In faradization, the positive pole should be placed on the back of the neck, and the negative pole over the region of the carotid artery, the current be continued for ten minutes, then for five minutes longer, the negative pole may be placed over the thyroid gland. In galvanism, the positive pole should be placed over the præcardial region, and the negative pole at the back of the neck.

Hydrotherapy, as well as electro-therapy, must be continued for a period of five or six months at least.

2. *Internal therapy.* According to Jaccond's theory, arsenic and the bromides should be given alternately. Arsenious acid should be given in gradually increasing doses, beginning with, perhaps, 0.002 gramme, and increasing this to 4, 6, or 8 mg. during the course of a week. The following week this treatment is abandoned, and bromide of potassium in 2 to 4 gramme doses is administered, morning and evening, in some alkaline mineral water. The subsequent week arsenic is substituted, and so forth. If asystolia occurs in consequence of a cardio-vascular asthenia, then digitalis is indicated, whether the asystolia be only temporary (acute dilatation of the heart), or permanent (valvular disease, myocardiac schlerosis); of mineral waters, those containing iron generally give the best results.

3. *Hygienic therapy.* This is of great importance, and should never be overlooked. Coffee, tea, and alcohol should be strictly forbidden, as well as the use of tobacco in any form. An avoidance of any severe muscular exertion or nervous shock or strain, and, finally, an almost exclusive diet of milk (one to two quarts a day), except in cases where there is an idiosyncrasy to this diet.

The chronic course of the disease necessitates a long and persistent treatment, the ultimate success of which greatly depends upon the patient's rigid obedience to the physician's orders.

Andrology is a paying specialty.

BOOK REVIEWS.

A MANUAL OF OPERATIVE SURGERY. By Frederick Treves, F. R. C. S., Surgeon to and Lecturer on Anatomy at the London Hospital; Member of the Board of Examiners of the Royal College of Surgeons. 2 vols., 1550 pp. Lea Brothers & Co., Philadelphia.

In the preparation of a work upon Operative Surgery, the writer is embarrassed by the extensive literature upon this subject, and it is only by the exercise of the greatest judgment in the proper selection of operative procedures that a work of practical value can be produced.

Mr. Treves being a practical surgeon, has exercised this power of selection in a wonderful degree, and has produced a work which could only have come from the pen of a surgeon of large operative experience; and for this reason it is certain to hold a high place among works upon this subject. The description of the various operations is concise and clear, and the author often quotes the words of the inventor of the special operations in its description, so that accuracy is insured, and in many cases adds his personal experience in the use of the procedure.

The sections of the work treating of the General Principles of Operative Surgery and of the after-treatment of operative cases, contain so much that is valuable, that it is worthy of the most careful study, and shows that the author is a careful clinical observer who believes that no painstaking care should be spared in the selection of the operation and the preparation of the patient to bring the case to a successful issue.

We are not a little surprised at the author's unqualified condemnation of the use of the *director* in surgical operations, for we have always considered it, when properly used, a most valuable surgical instrument, and we think he might as well condemn the scalpel, for evil has been done by its careless and injudicious use.

The chapters upon excision of scrofulous glands of the neck and plastic surgery contain much of practical value to guide the operator, and are worthy of careful reading. We are glad to see that Mr. Treves does not approve of the use of the Esmarch's elastic bandage in the excision of joints, although we cannot agree with him as to the evil results following its employment in the operation of osteotomy.

Mr. Treves does not think well of the wiring of the fragments in cases of fracture of the patella, but employs a more conservative method of treatment.

It is a satisfaction to see that so high an authority as the author does not consider it necessary to make a free dissection of the axilla in every case of carcinoma of the breast, if the presence of enlarged axillary glands cannot be demonstrated.

We notice that no mention is made of the operative treatment of varicose veins, and operative procedures employed in the treatment of necrosis and caries of bone.

The book as a whole contains so much valuable information of a practical character that we strongly recommend it to those who wish to consult a modern, practical and reliable work upon Operative Surgery.

THE JOHNS HOPKINS HOSPITAL REPORTS. REPORT IN PATHOLOGY I AMŒBIC DYSENTERY. By William T. Councilman, M. D., and Henri A. Laflem, M. D. The Johns Hopkins Press, Baltimore, Md., 1891.

To everyone interested in progressive medicine, and particularly in the advance of pathological light upon the many dark questions which still surround the acute diseases of the intestines and liver, this fresh contribution from Johns Hopkins will be welcome reading. The subject of this communication is one of exceeding interest not only as regards the disease which it considers, but more broadly because of the bearing it has upon the pathological rôle of the amœba.

The subject has been dealt with in a most scholarly manner, and all the literature of the subject has been amply quoted in support of the observations recorded by the authors, so that in this work one may find practically all that is worth reading in connection with amœbic dysentery. The lesions observed have been recorded in a number of very interesting plates, and these add value to the work.

It is impossible to give in a few words the results of the authors' work. Their observations go to prove that there is a distinct form of dysentery dependent upon the presence of amœbæ as the causative pathological factor, characterized by definite lesions differing in kind from those of ordinary dysentery, and differing also from lesions produced by any of the micro-organisms with which we are familiar, and thus the disease is frequently connected with hepatic and pulmonary abscesses.

To all interested in this subject we recommend this scholarly treatise, which contains the best of all our published facts regarding amœbic dysentery, as well as the records of the careful studies performed by the author at the Johns Hopkins University Hospital.

LITERARY NOTES.

SLEEP.

Like the passionate palm that breathes all the odors of day
To the soul of the night,
Like a river that runs and frets on its turbulent way
To the quiet deep,
Like the swallow, weary of cold, that southward gleams
To her land of delight,
So the heart overfull of its sorrow flows over in dreams
Of compassionate sleep.

Ruth Johnston, in March Lippincott's.

—The *Physician and Surgeon* was enlarged and improved, beginning with the January issue.

—If Herodotus may be called the father of history, Lucian, that versatile and somewhat erratic Greek writer of a later day, may, with equal good reason, be called the father of that form of fiction which has been developed into the modern short story. The volume of *Selections from Lucian*, which Harper & Brothers announce as nearly ready for publication, will certainly be heartily welcomed not only by those who love to read good stories, but by all who care to study the art of fiction as practised by its acknowledged masters. The translation of these *Selections* is by Emily James Smith, and the volume will be in every sense an attractive one.

—An Admirable volume entitled "*The Dog in Health and in Disease*," by Dr. Wesley Mills, discusses in detail the history of all the varieties of dogs, their breeding, education, and general management in health, and treatment in disease. The book is adapted for both the veterinarian, to whom the medical care of dogs is usually confided, and the general reader, whose interest may be limited to that involved in the ownership of a single animal. The writer is Professor of Physiology in the Faculty of Veterinary Science of McGill University, Montreal, the author of *Comparative Physiology* and other standard works on allied topics; and is further qualified for his task by the fact that he has, as he states in his preface, "for the greater part of his life studied this noble animal with pleasure and profit to his own nature." The volume contains a large number of illustrations related to the text, and is further embellished by portraits of various dogs of note of many breeds. Published by D. Appleton & Co.

PERISCOPE.

THERAPEUTICS.

A NEW REMEDY FOR RHEUMATISM.

According to the *Lyon Médical*, October 25, 1891, Dr. Betchine, of St. Petersburg, has made special studies in reference to *ephedra vulgaris*, a plant much esteemed by Russian peasants for its anti-rheumatic qualities. The bark and the root the observer found efficacious in acute articular rheumatism with high fever. In chronic rheumatism its most favorable action was merely a slight temporary amelioration. Unless fever is present the drug is not especially useful.

COLCHICINE FOR THE EYE.

Colchicine is recommended by Dr. Darier in certain eye affections, and is administered in pill form, each pill containing $\frac{1}{64}$ grain of the drug, of which from one to two or four, or even six pills, can be taken daily. Care must be taken to instruct patients to reduce the dose as soon as intestinal derangements manifest themselves. Some patients have taken as many as 200 pills without complaining of unfavorable symptoms.—*Medical News.*

ABRIN AND RICIN IN EYE AND OTHER AFFECTIONS.

The numerous points of resemblance in respect of the physiological action between abrin, the poisonous albumose to which the inflammatory action of preparations of jequirity seeds upon the eye is attributed, and ricin, the albumose of castor oil seeds, has, we learn on the authority of our contemporary the *Pharmaceutical Journal*, suggested the probability of their being identical. Both possess the property of coagulating the blood in a peculiar manner, giving rise to numerous thromboses, especially in the intestinal vessels; they also affect very similarly the mucous membrane of the eye, and they are both converted into non-poisonous substances by digestive ferments. Ehrlich's experiments, however, show that they are perfectly distinct alkaloids. One peculiar action of abrin is to cause the loss of hair speading round the point of injection. In its toxic properties ricin is found to be nearly twice as powerful as abrin, but when applied to the eye their action is reversed. Moreover, it is possible by special treatment to render an animal immune against both. The practical inference to be drawn from the results obtained by Ehrlich is that by the use at first of dilute solutions of either abrin and ricin, and then carefully and slowly increasing the strength, all danger to the eye in using these solutions may be avoided, without at all diminishing their therapeutic effect.

STRONTIUM IN BRIGHT'S DISEASE.

C. Paul (*Sem. Méd.*, November 18th, 1891) has made a number of observations on the action of strontium salts both in man and in animals. He first employed the lactate (prepared by neutralizing a 10 per cent. lactic acid solution with strontium hydrate), but has latterly employed only the bromide and nitrate. As a test of their purity these salts should give no precipitate with chromate of potash. He corroborates Laborde as to the innocuity of these salts. Guinea-pigs will bear from 15 to 20 centigrammes given hypodermically, and much larger doses by the mouth. The salt can then be found in the liver, bones, urine, and fæces. From observation in a very large number of cases he concludes that strontium is indicated, and gives very good results, in certain varieties of nephritis—parenchymatous, rheumatic, strumous, and gouty; it is also useful in the nephritis of puerperal or pregnant women, etc. Up to the present it has appeared ineffective in interstitial nephritis and in the renal lesions of tuberculosis or syphilis. Lastly, when the renal affection has arrived at the period of insufficiency or uræmia strontium is utterly useless.—*Brit. Med. Jour.*

METHYL VIOLET IN AFFECTIONS OF THE AIR PASSAGES.

Lincoln (*N. Y. Med. Jour.*, October 31st, 1891) says that methyl violet is very efficacious in checking chronic suppuration due to diseased bone after removal of the latter, as well as in ulceration of mucous membrane, particularly aphthous affections of the mouth. In acute follicular inflammation it is also useful, and especially so in chronic follicular affections of the tonsils and soft palate associated with the growth of micro-organisms (leptothrix). He used it in two cases of diphtheria, which recovered without sequelæ. One of these was a severe case of nasal diphtheria, in which the membrane went on spreading in spite of the application of sprays of corrosive sublimate, iodine, and carbolic acid, but yielded to the remedy. He has also had very satisfactory results with it in ozæna, both syphilitic and non-syphilitic. The drug has a drawback of staining the skin.

BENZONAPHTHOL A NEW REMEDY IN URÆMIA.

In the *Répetoire de Pharmacie* MM. Yoon and Berlios give an account of this new naphthol compound hitherto mentioned by us. Benzonaphthol is a benzoate of beta-naphthol prepared by the interaction of beta-naphthol with benzoyl-chloride, the effect of which is that the benzoyl group (C_7H_5O) takes the place of a hydrogen atom in the beta-naphthol. Its constitution is therefore, $C_{10}H_7C_7H_5O.O$. The resulting product, purified by crystallization from alcohol, is obtained in white, microscopic crystals, but may also be got in prismatic needles, if desired. It is without color, and is practically insoluble in water, soluble in rectified spirit to the extent of 2 or 3 grains in an ounce, and soluble 1 in 3 of chloroform. Benzo-naphthol is proposed as an intestinal antiseptic, preferable to beta-naphthol. In the system benzo-naphthol is split up into beta-naphthol and benzoic acid, the latter being eliminated by the urine as benzoic and hippuric acid. The therapeutic trials made with it show that it is as efficacious as betol and beta-naphthol, diminishing the toxicity of the urine considerably. It may be given to the extent of 5 gm. per day to adults, each dose of 50 cg. being enclosed in a cachet or suspended in a suitable mixture.

ACUTE AND CHRONIC DYSENTERY.

Dr. P. B. Green, of Wytheville, thinks that for the most part dysentery should be treated as a septic disease by antiseptics, such as iodoform, salicylic acid, creasote, naphthalin, etc. Sodium salicylate was perhaps the one to be generally preferred. Another good formula was—

℞ Carbon bisulphide.....ʒ vj.
Water.....ʒ xvj.
Spirit of peppermint.....gtt. xxx.
M. Shake well and let settle. Sig. Eight to ten drops in milk or water several times a day.

If no improvement in a week, then he used an injection, such as—

℞ Laudanum.....ʒ iij to iv.;
Oil of turpentine.....ʒ iijss.;
Powder gum arabic..... } āā ʒ ss.;
White sugar..... }
Camphor water.....ʒ iij.
M. Sig. Teaspoonful every four or six hours.

If hæmorrhage took place, he used ergotol hypodermically. Treatment by rectal injections of antiseptics had invariably proved successful in adults, and in most cases in children except infants. He preferred warm solutions of mercuric bichloride (from 1 to 10,000 to 1 to 3,000) every six to twelve hours. Listerine, salol, fluid extract of hydrastis, and the salicylates were other good antiseptics.

Dr. Bedford Brown, of Alexandria, suggests the following: Begin treatment with calomel as a cathartic, and follow this by a cleansing dose of Epsom salts. Then begin with antiseptic injections—about two drachms of carbolic acid to two or more pints of water. By the mouth, give a tablespoonful every three hours of—

℞ Aromatic sulphuric acid.....ʒ ij.;
Sulphate of magnesium.....ʒ ss.;
Deodorized tincture of opium.....ʒ ij.;
Syrup of orange-peel.....ʒ j.;
Peppermint water.....ʒ iij.;
Water.....ʒ ij.
M.

Occasionally full doses of Epsom salts were often needed to relieve congestions, correct secretions, etc. In severer cases, use more decided antiseptics, such as naphthalin, salol, and phenacetin, five grains of each every three hours, and irrigate the bowels twice daily with creolin. If adynamia occurred, marked by intensely fœtid discharges of blood mixed with mucus, pus, sloughs, etc., use injections of an ounce or two of hydrogen peroxide in a pint of water. Ichthyol dissolved in mucilage was also good. In threatened collapse, besides caffeine hypodermically, give one-hundredth grain each of atropine, strychnine, and nitroglycerine. In malignant hæmorrhagic forms, give half an ounce of turpentine in a pint of emulsion, and repeat the following every two or three hours:

℞ Opium.....gr. ss.;
Tannin.....gr. ii.;
Strychnine sulphate.....gr. $\frac{1}{50}$
Iodoform.....gr. j.;
Creasote.....gtt. j.
M.

In chronic dysentery, the septic fæcal matter, by constantly passing over the raw or wounded surfaces, kept up the septic condition. Tepid-water irrigations, followed by half-gallon injections twice a day of solutions of hydrogen peroxide, creolin, or ichthyol, would do good. It was best to administer these irrigations through a soft-rubber tube, about fifteen inches long, passed well up into the colon.

SALICYLATE OF SODA IN PLEURISY WITH EFFUSION.

Having used salicylate of soda in many cases of pleurisy with effusion with success, S. Déri (*Pest. Med.-Chir. Pr.*, No. 26, 1891) formulates his conclusions as follows:—

1. The salicylate-of-soda treatment will absorb pleuritic effusions even after being present for a long time.

2. In addition to its well-known diapho-

retic action, salicylate of soda appears to exert a specific action upon pleuritic effusions (as it does in polyarticular rheumatism.)

3, Inasmuch as cases treated by the salicylate of soda do not suffer relapse, the author believes that surgical intervention in pleurisy with serious effusion is seldom necessary, and may be considered even of secondary importance.—*Zeitschrift für Therapie*, No. 15, 1891, p. 117.

INCESSANT HICCOUGH RELIEVED BY LAVAGE OF THE STOMACH.

Dr. Everett J. Brown, writes in the *Medical Record* as follows:—

Reading in the daily press lately several accounts of a most persistent case of hiccough which had lasted many days and which was baffling the skill of the local medical fraternity, recalls to my mind a case of the same trouble which came under my care while a resident physician in Cook County Hospital, Chicago, of which case I find I have complete notes:

S. S——, a Russian peddler, aged twenty-seven, admitted to hospital April 30, 1888. Had always been in good health; on admission complained only of a persistent and incessant hiccough, which continued night and day; it had already lasted one week; he was thoroughly exhausted from loss of sleep and the pain and soreness produced by the constant contractions of the diaphragm; the usual remedies for these cases, such as morphine, bromide and chloral, ether, cannabis indica, bismuth, soda, and atropine, were each tried, but with little or no effect; morphine in large doses would relieve for one or two hours and allow the patient some sleep; electricity applied to the epigastrium and to the phrenic nerve was of no avail.

On examination over the region of the stomach that organ was found to be considerably dilated and to contain a large quantity of fluid; there were no external signs of a tumor or other pyloric obstruction; thinking that the dilatation of the stomach and the retention of fermenting food might be a cause of the hiccough I introduced a siphon-tube into the stomach and thoroughly washed out that organ; at least two quarts more of fluid were removed than had been introduced through the tube, and that which was removed was in a high state of fermentation. After this operation the hiccough entirely ceased and the patient had his first good night's sleep in sixteen days. He was discharged two days later with no return of the trouble.

THE LACTIC ACID TREATMENT OF DIARRHŒA.

In a number of cases of diarrhœa due to various causes, including phthisis, typhoid fever, erysipelas, and intestinal catarrh, which Dr. Shchegoleff, according to a paper he has published in the *Meditsinskoe Obozrênie*, treated by means of lactic acid, a successful result was obtained in two days in fifteen, in three days in five, and in four days in three. In twelve cases of exanthematous typhus the treatment failed to have effect, but in thirteen others it was successful. The preparation used was an aqueous solution sweetened with syrup. In this form the drug was well tolerated, and no unpleasant symptoms were produced.

The quantity of lactic acid given per diem averaged about 115 grains, or little more than half that given by M. Hayem, who first recommended this treatment, and this may perhaps account for some of the failures of the Russian practitioner. Acting on the advice of the latter, Dr. Chernisheff, who has also published an account of his cases, prescribed lactic acid in three cases of acute intestinal catarrh, in six of chronic gastro-intestinal catarrh, also in eight of diarrhœa due to phthisis, and in three of diarrhœa complicating Bright's disease. In all these cases good, sometimes striking, results were obtained. Thus several cases of simple catarrhal diarrhœa were relieved in from two to five days. In six cases of non-specific diarrhœa in phthisical persons the diarrhœa ceased the day after the commencement of the treatment. In one case of chronic gastro-intestinal catarrh the diarrhœa ceased on the third day from the commencement of the lactic acid treatment, but reappeared when it was stopped. Two days more of the treatment served to effect a more permanent cure. Notwithstanding the observations of MM. Hayem and Lesage on the value of lactic acid in the diarrhœa with green stools of young children (see THE LANCET, vol. i. 1887, p. 1149, and vol. ii. 1887, p. 1020), according to whom lactic acid destroys the bacillus on which the condition depends, this medicament is rarely used, and indeed, is not generally known to have any effect on infantile or other diarrhœa.—*Lancet.*

A charming bit of natural history, by Ernest Ingersoll, describing the habits and characteristics of "Our Gray Squirrels," with illustrations by J. Carter Beard, was one of the attractive features of *Harper's Magazine* for March.

MEDICINE.

RETURN OF SENSIBILITY AFTER FOURTEEN YEARS' LOSS.

Dr. Walton relates an interesting case in the autumn number of the *Journal of Nervous and Mental Diseases.* The patient was a man of twenty-nine, who had had anæsthesia of the left hand, more especially in the index finger, where it had persisted for fourteen years as the result of an injury to the finger. The scar of the old injury to this finger was a linear one extending diagonally across the palmar side of the index finger, and it was very sensitive to deep, and less so to superficial, pressure. The patient was neurotic, run down with hard and incessant work, and had formerly suffered from extensive anæsthesia of the left arm, and from patches of anæsthesia in other parts. He was first treated with galvanism and ordinary tonic remedies, but as there was no improvement, after a few weeks an operation was resolved upon. An incision an inch in length was made over the digital branch to the left index finger, and on this nerve a small neuroma was found and, together with half an inch of the nerve, removed. The improvement in the case was slow at first, but more rapid afterwards, and a year after the operation recovery was complete, the sensibility being restored where it had been lost, and the once painful part now quite painless. The patient's general condition had also improved, and from being thin and neurasthenic he had come to look stout and well. The restoration of the function of a sensory nerve which had been in abeyance for fourteen years is very interesting, and should be encouraging with regard to the operative treatment of peripheral nerves, even in cases apparently hopeless.

LEUKÆMIA ACUTISSIMA.

Guttmann (*Berlin. klin. Woch.*, November 9th, 1891) relates a case of severe leukæmia, which proved fatal four days and a half after the onset of the first symptoms. The patient, a spare boy, aged 10, after complaining for some time of debility, was suddenly seized with hæmaturia, numerous ecchymoses appearing in different regions of the body; the next day some bleeding also took place from the nose and mouth. Two days later complete unconciousness set in, together with paralysis of the right side, some twitching of the muscles, and priapism. Microscopical examination of the blood showed that the proportion of white to red corpuscles had enormously increased, being as 1 to 1.4. These symptoms continued for two days, when death took place, four days and a half after seizure. *Post mortem* numerous ecchymoses were found on the skin and on the surface of the heart. The thymus was greatly enlarged, measuring nearly as much as the heart. The spleen amounted to three times its usual size; the pelvis of the right kidney contained blood. The left lateral ventricle of the brain was occupied by a large blood clot, which had destroyed a considerable portion of the corpus striatum, optic thalamus, and neighboring brain tissue. A small clot was also found in the right parietal lobe. No marked enlargement of the lymphatic glands was present. This case, says Guttmann, exhibits an unusually rapid development of acute leukæmia, death being caused by the cerebral hæmorrhage. The other unusual symptoms were the swelling of the thymus and the priapism, the latter being possibly due to hæmorrhage into the corpora cavernosa. No cause for the illness could be discovered. Bacteriological examination of the blood gave a negative result.—*Brit. Med. Jour.*

PODOPHYLLOTOXINE.

Dr. Kürsten, in investigation the rhizome of podophyllin, taking up the study where Podwyssotski left off, has found that the substance called podophyllotoxine by the latter author is in reality a most complex material. Precipitating a chloroform solution of it by means of the addition of petroleum ether, Kürsten obtained a crystalline body of exceeding activity. This body he subsequently obtained directly from the root by exhausting the latter in chloroform, and subsequent precipitation of the chloroform solution with petroleum benzine. It exists in the root in the quantity of 2 parts to 1,000. The formula, established by Kürsten, is $C_{23}H_{24}O_9$, with 2 molecules of water of crystallization. Kürsten proposes the name podophyllotoxine for this definite product.

THE ORIGIN OF CITRIC ACID IN MILK.

With ordinary fodder citric acid occurs in goat's milk, as in cow's milk, to the extent of 1 to 1.5 gm. per litre; but the amount is liable to considerable fluctuations, being sometimes twice as great as at others (calculating it upon the total solids). It does not appear to be derived from the citric acid present ready formed in the fodder, as it also occurs, though in smaller quantity, in human milk. Moreover, citric acid added to the fodder does not increase the amount found in the milk, and feeding exclusively upon materials free

from citric acid has no effect upon the quantity excreted. Milk secreted in a state of hunger contains the normal amount of citric acid. Citric acid in milk is apparently not derived from the cellulose undergoing digestion in the intestines of herbivora, as excretion goes on when food is withheld or meal substituted for ordinary fodder; this is consistent with the fact that in the human subject (where no digestion of cellulose takes place) 0.54 to 0.57 gm. of citric acid per litre of milk is formed.

GASTRIC HEADACHE.

Dr. Westphalen has found that toxic substances in the stomach under certain conditions are capable of producing, through absorption, disturbances of circulation in the central nervous system and its associated parts which result in headache. A complete absence of hydrochloric acid in the stomach contents was found, and when this acid was prescribed complete recovery followed. The theory advanced for the beneficial action of this drug is that ptomaïnes or toxines of micro-organisms exert an injurious influence only when there is a deficiency in the quantity of free mineral acid in the stomach. Headache may also be prevented in such cases by administering the acid directly after the patient has eaten articles which have previously always been followed by headache. The nature of the noxious substance is at times obscure, as in instances where indigestion, headache, and urticaria follow the use of chocolate or strawberries, but in such cases also hydrochloric acid acts well.—*Berliner Klinische Wochenschrift,* No. 37, 1891.

A GASTROLITH IN MAN.

Dr. Kooyker has reported in the *Zeitschrift für Klinische Medicin* another case of gastric calculus—a condition which, though common enough in animals, is so rare in man that so far only seven cases have been reported. Dr. Kooyker's case was that of a man fifty-two years old, in whose lifetime it had been impossible to make a positive diagnosis, though some neoplasm of the stomach was suspected. The patient died from exhaustion. At the post-mortem examination a concretion was found in the stomach, almost entirely filling its cavity, which weighed 885 grammes, and was eighteen centimetres in length. The microscopic examination resulted in finding starch, vegetable cells, chlorophyll, and vascular tufts, while hair and other animal elements were entirely absent.—*Lancet.*

OBSERVATIONS ON THE SECRETION OF BILE IN A CASE OF BILIARY FISTULA.

In this paper, A. W. Mayo Robson (*Proceedings of the Royal Society,* vol. xlviii) gives an account of the observations made upon the biliary secretion in a patient with obstruction of the common bile duct, and in whom an artificial biliary fistula between the gall bladder and external surface had been produced, through which the whole of the bile was discharged for fifteen months. During this time the digestion was unimpaired, bowels regular, without the use of aperients, and the odor of the fæces did not differ from that of a healthy motion. Menstruation ceased while the fistula was patent, but became regular and normal as soon as the bile was again turned into the intestine by operative interference.

The following are the principal conclusions which Mr. Mayo Robson draws from his observations:

1. The bile is probably chiefly excrementitious, and, like the urine, is constantly being formed and cast out.

2. Though the bile probably assists in the absorption of fat, its presence in the intestine is not necessary for the digestion of such an amount of fat as is capable of supporting life and keeping up nutrition. Much fatty matter in the patient's food did, however, produce a marked effect—a sickly feeling, loss of appetite, and more fat than normal in the fæces.

3. Increase in body weight and good health are quite compatible with the entire absence of bile from the intestines.

4. The antiseptic properties of bile are unimportant; this was tested only by the character of the fæces, which neither by odor nor aspect indicated any irregular fermentative process for the fifteen months during which no bile passed into the intestine.

5. Whatever little antiseptic quality bile may have is probably derived from its admixture with the gall bladder fluid.

6. The supposed stimulating effect of the bile on the intestinal walls is not necessary for a regular action of the bowels.

7. The quantity of bile excreted in the twenty-four hours during health in a person of average weight may vary between 39 oz. 4 dr. and 25 oz. 6 dr., with an average of 30 oz; 2½ ox. of this is due to the fluid secreted by the gall bladder, as determined in a case of the author's, in which an operation for the relief of a gall bladder distended by gall stones, with stricture and occlusion of the cystic duct, was followed by a fistula of the gall bladder, from which a clear and somewhat viscid fluid issued, containing no bile

constituents. This was held to be the normal secretion of the gall bladder.

8. More bile is excreted during the day than at night, the excess varying between 5 oz. and 3 dr.

9. The excretion of bile seems to go on constantly and with great regularity.

10. The excretion is apparently not materially influenced by diet.

11. The pigment of fresh human bile is biliverdin, the color of the fresh bile was always green.

12. The supposed cholagogues investigated seem to rather diminish than increase the amount of bile excreted. These drugs were—

(*a.*) *Calomel*, 5 grs. at 7 P. M. caused a slight aperient effect the next morning, but the amount of bile excreted within ten hours after the administration was less than the amount for the ten hours before the drug was given, by over 2 ounces.

(*b.*) *Euonymin*, 4 gr., less bile was excreted in the ensuing four hours than in the four hours before administration.

(*c.*) *Rhubarb*, ½ oz. and 1 oz. of the tincture could not be said to cause any increased flow.

(*d.*) *Podophyllum* was given on one occasion, and no cholagogue effect was noticed.

(*e.*) *Carbonate of soda*, in the form of aërated soda water, was given, and produced in two hours a maintained increased flow, not succeeded by a marked diminution.

(*f.*) *Iridin*, 4 gr. apparently increased the flow temporarily (though a greater flow was observed at the same time of the day on other occasions when no drug had been given), but without augmenting the total quantity in twenty-four hours.

(*g.*) *Turpentine*, 15 min. given in capsules every four hours. Although an increase was apparent on the second day, yet the daily amount of bile discharged in the twenty-four hours was not so much as on many days when no turpentine was being given. The odor of turpentine was perceived in the bile soon after its administration.

(*h.*) *Benzoate of soda* caused no positive increase in the flow of bile, contrary to the results obtained on dogs by MM. Prévost and Binet.—*Medical Chronicle.*

SPASMS OF THE GLOTTIS.

The following formula (*Lo Sperimentale*, No. 21, 1891) is praised:

℞

Chloroform	gtts. 5–10.
Aq. destillat.	gms. 25.
Glycerine	gms. 5.

A teaspoonful every half hour.

SURGERY.

THE RADICAL CURE OF HYDROCELE BY EXCISION OF THE SAC.

In the *Lancet* of Sept. 10, 1887, and Oct. 26th, 1889, Dr. Southam recorded seven cases of hydrocele treated by excision of the sac, and also directed attention to the favorable results which follow this method of radical cure. The three cases mentioned below (*Lancet*, July 25, 1891), which have recently been under his care, are good illustrations of some of the conditions in which this treatment is especially valuable. In Case 1 the hydrocele was of the variety known as "multilocular," being composed of a number of separate cysts, and therefore not likely to have been cured by injection. Cases 2 and 3 would also have been unsuitable for treatment by injection, for in each the sac-wall was so thick and rigid that it was incapable of collapsing after the evacuation of its contents by tapping, consequently a large thick-walled sac remained, which was best excised, for if treated by the alternative method of radical cure—viz, by "incision"—its obliteration by a process of granulation would have been a tedious and uncertain mode of healing. In all three cases excision of the sac, which for reasons given in the papers above referred to, he believed to be far preferable to "incision," was followed by the most satisfactory results.

Case 1. *Multilocular hydrocele; excision of sac; recovery.*—F. E——, aged forty-three, sent by Dr. Blayney of Middleton, was admitted on Feb. 18, 1891, suffering from a hydrocele of the tunica vaginalis, which had been present for several years, and had been tapped twice; on the first occasion about eight ounces of clear fluid had been evacuated, but on the second only a few drops came away, and there was no diminution in the size of the swelling. As he was anxious to have a radical cure performed, and did not wish to run the risk of an unsuccessful injection, it was resolved to excise the sac. The operation was performed on Feb. 20th. On laying open the sac of the hydrocele the cavity of the tunica vaginalis was found to be divided by delicate septa into a number of compartments, some quite distinct, others communicating with one another. The tunica vaginalis having been separated from its connections with the scrotal tissues, the whole of the parietal layer was removed by dividing it close to its reflection on the testicle and cord. All bleeding having been carefully arrested, the wound was closed, no drainage being employed. Repair took place without any sup-

puration; the patient was up on the twelfth, and left the hospital on the nineteenth day after the operation, the wound being firmly healed.

Case 2. *Hæmatocele after tapping a hydrocele; previous unsuccessful injection with iodine; excision of sac; recovery.*—W. R——, aged twenty-three was admitted on April 27th, 1891, with a history of a hydrocele of the tunica vaginalis, which had been present for about ten years. It had been previously tapped twice, and once injected with iodine, The last tapping had been performed three days previously to admission, when six ounces of clear straw-colored fluid were drawn off; in the course of twenty-four hours the swelling reappeared, and the integuments covering it became dark and discolored. As it was evident that the case was one of hæmatocele, following the operation of tapping a hydrocele, it was resolved to lay open the sac, evacuate the blood, and at the same time perform a radical cure by excising the tunica vaginalis. The operation was performed on May 2d. A free incision was made into the cavity of the tunica vaginalis, which was found full of sanious fluid and portions of blood-clot, and the sac-wall, which was extremely thick and of dense fibrous consistence, was dissected out and removed up to its reflection on the testicle. The wound was then closed, a drainage-tube being brought out at its upper and lower margins. Healing quickly took place, and the patient left the hospital on the twenty-first day after the operation.

Case 3. *Suppuration in tunica vaginalis after tapping a hydrocele; excision of sac; recovery.*—E. S——, aged sixty-two years, was sent on Feb. 16th, 1891, by Dr. Fletcher of Bury, suffering from a large hydrocele of twenty years' duration, for which no treatment had previously been adopted. On tapping the tumor, which was quite opaque, about a pint of thick brownish fluid was drawn off. After the evacuation of the fluid the sac-wall could be felt through the scrotal tissues to be extremely thick and of such rigid consistence that it was incapable of collapsing. On March 27th the hydrocele was tapped again, about the same quantity of fluid of a similar nature being removed. It gradually refilled and subsequently became extremely painful and tender. On April 25th he was admitted into the infirmary. The integuments of the front of the scrotum were in a gangrenous condition, and the adjacent parts were much inflamed. The same day a free incision was made into the cavity of the tunica vaginalis, which was full of pus; the tunica itself which was thickened and calcified, was dissected out, and as the testis, though healthy, was greatly atrophied, it was also removed; a considerable portion of the gangrenous scrotal integument was also taken away. (The patient was the subject of an irreducible inguinal omental hernia on the same side. As the sac of the hernia was intimately adherent to that of the hydrocele, a radical cure was also performed on the hernia at the same time. A ligature was placed round the neck of the hernial sac as high up as possible, and the sac and omentum were then removed on the distal side of the ligature.) The margins of the upper part of the wound were then brought together by a few sutures, the lower part being left open on account of the inflamed condition of the scrotal tissues. Healing was somewhat slow, as there was some sloughing of the margins of the lower portion of the wound; it was, however, sufficiently advanced to allow the patient to leave the hospital exactly a month after the operation, a small granulating surface still being present.

TREATMENT OF CAUSES OF LIMPING.

Simon states (*Arch. f. Kimlich.*, xii., 5 and 6) that one of the commonest and most important causes of lameness in children is coxitis. It calls for attention at the beginning, while it is still an arthritis and before there is tumor albus, abscess, or luxation of the head of the femur. Treatment should be general and local, the former having special reference to general disease like scrofula, and consisting in the use of tonics and stimulants, cod-liver oil during the winter, and phosphate of lime. The local treatment consists primarily in immobilization, and whatever form of apparatus is used this must be a primary consideration. The author approves of the extension apparatus of Guersant, which is provided with weights for overcoming muscular contraction. It is sometimes necessary to use chloroform anæsthesia as an assistant to the apparatus in overcoming this contraction. The Guersant apparatus allows one to make the necessary inspection of the diseased joint and to use the necessary local means. If the leg has no defective position it is well to use that form of the Guersant apparatus which fixes the pelvis and trochanter completely. Verneuil's and Bonnet's apparatuses are also recommended, though the expense of the latter may be considered an objection to it. If the disease has lasted a long time, and the leg is in a vicious position, with or without ankylosis, re-dressment under chloroform

anæsthesia is indicated, and then immobilization if inflammatory conditions have disappeared. Abscesses should be opened and treated with iodoform-ether. If healing has advanced so far that a relapse into a bad position is not to be feared, the immovable apparatus may be replaced by a movable one. After one to three years, healing will usually be so far advanced that the patient can go about on crutches. Since relapses are to be feared, one must not begin to lay aside supporting apparatus until ankylosis of the joint in a good position has occurred. Coxitis is one of the most deceptive of diseases, and almost always ends with shortening of the leg to a greater or less extent. Another cause of lameness consists in congenital luxation of the hip-joint. This is usually incomplete and increases by degrees. By using suitable apparatus the destructive process in the head of the femur may be retarded. Arthritis of the knee- and ankle-joints may be treated at first with revulsives, vesicants, and immobilization. Internally one may give salicylate of soda in the acute stage, and in chronic cases tincture of colchicum in five- to ten-drop doses, suspending its use for a time after eight or ten days. Tonics must also be employed, also massage and weak currents of electricity. Passive movements of the joint should also be practised to prevent stiffness. If there is periostitis or a small abscess, one may inject iodoform-ether; if there are large abscesses, curetting under the most careful antisepsis is advisable. If there is inflammation of the trochanter, immobilization is of first importance, and then one may use revulsives or actual cautery, burning even to the bone. To relieve the pain one may give belladonna and hyoscyamus, the limb being enveloped in cotton.

Another cause of lameness is infantile paralysis. Should it begin with fever, the treatment should first consist in derivatives, such as flying blisters and the actual cautery, then hot-air baths to cause profuse sweating. At night one may give chloral, and during the day aconite and nux vomica in doses of ten drops or less. When the febrile period is over the galvanic current may be used every three days for ten minutes at a time. Carefully regulated gymnastic exercises will also be of service, also sulphur-baths, salt-baths, and tonics—especially nux vomica.

In paralysis from brain lesion electricity is not indicated. One must lessen rather than increase the excitement of the nervous system. If the brain lesion is of syphilitic origin, iodide of potash should be used. If there is sclerosis of the brain, bromide of potash and iodine may be given in combination. All excitement must be avoided, and the treatment be directed to that lesion which is the fundamental cause of the lameness.—*Amer. Jour. Med. Sci.*

VARICOSE ULCERS OF THE LEGS.

Dr. David Fejér publishes in the *Orvosi Hetilap* an account of his treatment of ulcerated varicose legs, which has the advantage of not requiring any long confinement of the patient in the recumbent posture. He first cauterizes dirty-looking ulcers, if they are covered merely by a thin layer of pus, with nitrate of silver, those which are covered by a thick diphtheritic layer being treated with chloride of zinc, while fetid and gangrenous ulcers are destroyed by the actual cautery. According to the applications, the dressing is changed in three, five, or ten days, during which time the patient has his legs elevated. Before the dressing is applied the ulcers and the surrounding skin are washed with water or a sublimate solution of the strength of 1 to 2000. A thin layer of iodoform is then dusted over the ulcers, which are ultimately covered with a mercurial plaster spread, after softening to the thickness of two millimetres on thin calico cut somewhat larger than the circumference of the ulcers. This is followed by a cotton-wool tampon. The leg is then covered with a thin layer of Brun's cotton-wool, after the skin has been dusted with some innocuous powder. It is convenient to steady the dressing with a gauze bandage, so that the fine flannel bandage which completes the dressing may be easier of application. In some cases the plaster may be followed by an elastic bandage, which is especially appropriate in elephantiasis of the foot and in indurated ulcers, and may be combined with massage of the leg. The best powder for dusting the skin as a prophylactic against eczema is oxide of zinc or bismuth. Massage may even be practised on the bandaged leg, provided the ulcers have assumed a clean appearance. Under this treatment the patient may walk about in from four to ten days, and may after a few days more attend to his business. He must, however, when resting, always lie down, and even when he is sitting his legs must be in a horizontal position. Another advantage accruing from this treatment is that the dressing does not require changing until after three or four, and later on only at intervals of eight or ten, days; and that indurated ulcers of long standing are made to heal by this process, provided no destruction of tissue has taken place which cannot anatomically be

replaced, and provided also that the patient does not suffer from any serious constitutional affection. Dr. Fejér does not recommend skin-grafting, but prefers to loosen the skin surrounding the ulcer with the knife for a distance of ten centimetres or more, and then to approximate the loosened portions. This must, of course, only be done after the ulcer has been cleansed, and after the skin and the connective tissue underneath have become soft, as gangrene would otherwise occur. Some treatment should be continued after the varicose ulcers have healed. Dr. Fejér thinks it sufficient in slight cases for the patient to assume the recumbent posture twice or three times a day for five or ten minutes each time, and to move the leg about while elevated. Persons who cannot spare the time for the above dressing may substitute an elastic stocking, which, however, must be examined every morning *in situ*, and altered to the decreased size of the leg, as the latter frequently swells during the day while the patient is walking about.—*Lancet.*

LIGATION OF ARTERIES.

In an excellent lecture by Prof. Ashhurst, reported in *Gaillard's Medical Journal*, the following practical conclusions are formulated:

1. The best material for ligatures, as far as my experience enables me to judge, is catgut, prepared with alcohol and oil of juniper for ordinary operations, but with chromic acid for ligations of vessels in their continuity. For the lateral closure of veins I am disposed to recommend fine carbolized silk.

2. In dealing with arteries, the ligature should be tightly tied so as to divide the inner and middle coats of the vessel. In cases of hæmorrhage in continuity, double ligatures should be used, and the artery may properly be divided between them. In cases of aneurism, a single ligature applied through a very small opening in the sheath is safer. In dealing with the trunk veins of the extremities, the dangers attending complete occlusion are so grave that it is worthy of consideration whether, in cases of punctured or longitudinal wound, lateral closure in some form might not be advantageously substituted for the ordinary double ligature.

3. In the treatment of hæmorrhage in the continuity of an artery, the vessel should be tied where it bleeds, and on both sides of the bleeding orifice. In the treatment of aneurism, on the other hand, the ligature is best applied at a distance, as in the Hunterian method.

4. In cases in which the great veins are wounded, the vein only should be tied. Simultaneous ligation of the artery increases the risk of gangrene by cutting off the *vis a tergo*, which is needed to maintain the circulation.

5. In the surgical treatment of aneurism, digital compression on the cardiac side of the tumor may be considered the "ideal" method. When it it not applicable, or if it has failed, the Hunterian mode of ligation is the best substitute, and Anel's method, the "old operation," and the various plans of distal ligature, should be reserved for cases to which Hunter's method is not applicable. For aneurisms of the innominate or thoracic aorta, simultaneous ligation of the carotid and subclavian of the affected side is preferable to the ligation of either artery separately. For subclavian aneurism, shoulder-joint amputation is to be recommended as a modified distal operation.

OBSTETRICS.

ONE BREAST OR TWO.

In a recent number of the *Lyon Medical*, Sabaite referred to some observations he had made upon the mortality of infants nursed by women who for some reason used only one breast. He found that the death-rate is much higher in these cases than in those where both breasts were employed. In thirty-two of the former, among hospital patients, the infantile mortality was forty-eight per cent.; in the same number of the latter, under similar circumstances, the mortality was but twenty-eight per cent.—*Medical Press.*

TEMPORARY BLINDNESS DURING LACTATION.

Nettleship (*Ophth. Hosp. Rep.* xiii, 2. December 1891), reports several cases of temporary failure of sight in women during lactation. These cases are distinguished from those of retinal disease due to the albuminuria of pregnancy, and also from those in which blindness results from severe *post-partum* hæmorrhage. He has not seen any of the cases he describes during the time of blindness, but the ophthalmoscopic appearances present at various periods after the attack, point with more or less certainty to a previous optic neuritis. He believes that these cases will probably be found to belong to the same group as the optic neuritis now and then met with in chronic anæmia.—*Brit. Med. Jour.*

EARLY DETECTION OF PREGNANCY.

Dr. R. L. Dickinson claims (*Brooklyn Med. Jour.*) that he can determine pregnancy at a very early period. According to him the most distinctive changes in early pregnancy are bulging and elasticity of the upper part of the uterus. When the bulging is posterior, it is usually very distinct, resembling a ledge. Of his cases, the changes were demonstrated, and the cases diagnosed as pregnancies, one on the sixteenth day after a single coitus, one case on the nineteenth day, one on the twenty-first day, several between the twenty-second and twenty-fifth. He knows perfectly well that the spermatozoa may lie some days waiting for the ovum, and that the ovum may remain some days before it may meet with the spermatozoa, also that impregnation usually occurs in the tube, and then that the ovum must slowly travel into the uterus and find lodging, and therefore we would have to subtract ordinarily some days from his statement. For instance, a case of pregnancy nineteen days after coitus we might have to report as only twelve days pregnant, but he takes it in such a case, where the uterus distinctly enlarges as early as the nineteenth day after a single coitus, that impregnation of the ovum must have occurred in the uterus, in order to permit the enlargement to have occurred so rapidly.

The main point which he wishes to emphasize is, that the elasticity, resiliency and bulging of the body of the uterus are far more valuable as signs of pregnancy than the compressibility at the junction of the body and cervix (Hegar's).

MISAPPLICATION OF THE OBSTETRIC FORCEPS.

M. McLean (*N. Y. Jour. of Gyn. and Obstet.*, November 1891) says that in every case requiring forceps there is a proper time for operation. Every minute's delay after that time may be harmful. Too early application is yet more serious. The fretfulness of the patient in the first stage is not necessarily a warrant to interfere. The moulding of the head, the softening and dilating of soft parts of the parturient canal, the proper adaptation of the head to the canal, should be remembered as essentials in a normal case. The hand should always be used to determine the precise position of the head before introducing the blades. The head should be grasped so as to ensure the proper diameters opposed to the walls of the canal. In making traction, not only should the pelvic curve be respected, but the spiral action of the head should be encouraged by allowing the forceps handles to turn in the direction indicated by the non-resisting forces. The blades should be removed as soon as the face of the child can be manipulated through the recto-coccygeal tissues and the rest of the delivery completed by the hand. The forceps are too often applied in cases where the position of the child, the disproportion between the head and the obstetric canal, and other circumstances make it advantageous to select version instead of the instrumental operation. To apply the forceps in these cases indiscriminately and as a matter of routine, and then, after failing, to resort to version, is an almost reckless disregard of cardinal rules of obstetrics. Too many operators look upon version as the more serious operation, because in nine-tenths of the cases where version has been attempted it has, unfortunately, been undertaken in a case already damaged by misapplied forceps.—*Brit. Med. Jour.*

GYNÆCOLOGY.

LIPOMA OF THE TUBE.

Parona (*Annal. di Ostet e Gin.*, 1891, No. 2) relates a case of removal of the appendages for myoma. On the right side a fatty tumor was discovered. It occupied half the broad ligament, and the ovary, quite healthy, hung from it. The tube was embedded in the tumor, and only the fimbriated extremity was visible. The origin of the tumor was ascribed to a tubal fimbria.

THE TREATMENT OF ENDOMETRITIS.

Kaltenbach (*Centralblatt für Gynäkologie*, 1891, No. 44) disapproves of the application of caustics, which may cause atresia of the cervical canal. Forcible dilatation often repeated is also reprehensible, since lesions of the mucosa are thus produced, infection of which may readily give rise to parametritis through the medium of the lymphatics. Even if infection is avoided, repeated dilatation, irrigation, or applications to the interior of the uterus keep the patient in a constant state of nervous irritability, detrimental to her health, aside from the danger of causing toxic symptoms. Many cases of catarrh fail to improve because proper precautions are not taken to avoid fresh infection. The vulva and vagina should be thoroughly disinfected before any application is made to the endometrium. After this has been done, the uterine cavity should first be cleansed with sterilized gauze, followed by an application of strong tincture of iodine. In cases of long

standing the thorough use of the curette should precede these applications, this treatment to be repeated only at long intervals.

Mackenrodt (*Ibid.*) does not hesitate to adopt the same treatment (injection of tincture of iodine after curetting), even when the adnexa are secondarily affected, provided that the presence of suppuration is positively excluded. It is, of course, not begun until the acute stage has passed. Forty-five cases are reported, in none of which were any bad symptoms noted. Seventeen patients were cured and twenty-two were improved.

DISINFECTION OF THE HANDS.

Dr. H. A. Kelly, (*American Journal of Obstetrics*, December, 1891), after giving the details of a large number of experiments made by himself and his associates, gives the following conclusions as to the best method of disinfecting the hands:

Scrubbing the hands with especial attention to the nails,—not more than one millimetre in length,—for ten minutes in water, frequently changed, at about 104° F. Immersion of the hands in a solution of permanganate of potassium, made by adding an excess of the salt to boiling distilled water, until every part of the hands and lower forearms is stained a deep mahogany red or almost black color. They are then transferred at once to a saturated solution of oxalic acid until completely decolorized and of a healthy pink color. Washing off the oxalic acid in warm sterilized water.

By this simple process the hands are rendered more nearly absolutely aseptic than by any other known means.

The author has found that it is impossible to get rid of staphylococci by scrubbing the hands and nails from ten to twenty-five minutes with a sterilized brush, soap and water, temperature 104° F. The bichloride of mercury solutions as used, up to 1: 500, are not germicidal, as supposed. Previous erroneous conclusions as to the efficiency of the bichloride are shown to be due to an inhibiting action which may persist at least twenty-four hours after the last use of the drug. Hydrogen peroxide and lysol (four per cent.) were tested and found wanting.

In the present state of our bacteriological knowledge as to the causes of inflammation and suppuration, we are bound to use every means in our power to avoid sowing any unnecessary germs in our wounds. Soap and water are, Dr. Kelly believes, the best disinfectants, if we use but one, for they remove all germs which will come away easily. The bichloride of mercury, although dangerous on wounds on accounte of its property of coagulating and causing necrosis of albuminous tissues, has the valuable property of inhibiting those germs with which it comes into contact. Permaganate of potassium and oxalic acid are harmless to the hands and are germicidal. Soap and water plus the permaganate of potassium and oxalic acid are the only true germicides, and therefore the best disinfectants we possess to-day.

HELENIN IN THE TREATMENT OF LEUCORRHŒA.

In the *Archives de tocologie et de gynécologie* for December M. Hamonic relates his experience with helenin as a remedy. He has found it worse than useless in gonorrhœa, but capable of curing cervical leucorrhœa, even without topical treatment. He prescribes the following formula: Crude helenin, inulin, each, 15 grains; sugar of milk, q. s. Mix, divide into 100 pills. From two to four to be taken daily. The inulin is said to have no remedial power, and to be replaceable by powdered licorice or conserve of roses. Used as an injection, inulin simply irritates the vagina.

BENZO-NAPHTHOL.

A report of this new compound, by MM. Yvon and Berlioz, appears in the *Répertoire de Pharmacie*. It is a benzoate of beta-naphthol prepared by the interaction of beta-naphthol with benzoyl chloride, the effect of which is that the benzoyl group (C_7H_5O) takes the place of a hydrogen atom in the beta-naphthol. Its constitution is, therefore, $C_{10}H_7C_7H_5O.O$. The resulting product, purified by crystallization from alcohol, is obtained in white, microscopic crystals, but may also be got in prismatic needles if desired. It is without odor, and is practically insoluble in water, soluble in rectified spirit to the extent of 2 or 3 grains in an ounce, and soluble 1 in 3 of chloroform. Benzo-naphthol is proposed as an intestinal antiseptic preferable to beta-naphthol. In the system benzo-naphthol is split up into beta-naphthol and benzoic acid, the latter being eliminated by the urine as benzoic and hippuric acids. The therapeutic trials made with it show that it is as efficacious as betol and beta-naphthol, diminishing the toxicity of the urine considerably. It may be given to the extent of 5 gm. per day to adults, each dose of 50 cgm. being enclosed in a cachet or suspended in a suitable mixture.—*Chem. and Drug.*

PÆDIATRICS.

LOCAL TREATMENT OF THE THROAT IN DIPHTHERIA.

The cruel and useless practice of swabbing out the throat with caustic applications in diphtheria of the fauces has, I think, died out, but this method of applying astringents, such as perchloride of iron, or antiseptics and solvents, still survives. The diphtheria wards in the Hospital for Sick Children afford exceptional opportunities for observing the effects of various methods of local treatment; and, from long observation, I have no hesitation in condemning as injurious the system of brushing out. And this for several reasons. In the first place, on account of the distress it causes to the patient. In the case of a young child it involves a severe struggle; sometimes the help of two or three persons is required to overcome the fierce resistance, and to open the mouth and reach the fauces. It causes terror, excitement, heart strain and physical exhaustion—conditions most inimical in a disease tending to death by asthenia—and the distressing process has to be repeated frequently if it is to be effectual. Moreover, apart from this matter of the wear and tear involved, the rough treatment of the fauces probably does harm by causing abrasions of the surface, and thus favoring absorption of the local poison. We know how readily fresh raw surfaces of all kinds take up poisons which come in contact with them. Witness, for example, the communication of scarlet fever in surgical operations, the absorption of morphine from a blistered surface. If the diphtherial poison is rendered more available for circulation by the application of solvents, the infective absorption is liable to be still greater. The most rapidly fatal case of diphtheria from profound general systematic poisoning I ever have seen was one in which the throat was cleared of membrane by brushing out with papain.

I am sure that not only are the patients saved great distress, and doctors and nurses much trouble and anxiety, by the abandonment of the brushing-out process, but the results generally have been more satisfactory. Insufflation with iodoform or sulphur, or spraying with boric acid or corrosive sublimate solutions, are far more easy of application and more effectual in antiseptic action.

There are other errors in treatment of which I should like to say something, such as oppressive poulticing of the chest in pneumonia, obstructive to respiratory movement, and tending to increase the body heat; the administration of emetics in diphtheritic croup, which is utterly ineffectual except to depress and exhaust the patient; their frequent repetition in bronchitis and whooping cough when there is no extreme mucous obstruction of the air passage to justify it; the too free purging of rickety children suffering from laryngismus and convulsions under the belief that irritant matter in the alimentary canal is the sole cause of evil. But time forbids me to do more than allude to these things. I will merely add this word of advice. In treatment, consider as carefully what not to do as what to do. To avoid doing harm is as important as to effect positive good.—*Dr. W. B. Cheadle, in the Practitioner.*

SALICYLIC ACID FOR THE PREVENTION OF SCARLET FEVER.

Sticker reports the observations of G. De Rosa, who administered salicylic acid in doses of one to five grains, to sixty-six children exposed to infection during an epidemic of scarlet fever. Twenty-seven cases of the disease existed in the building when administration of the drug was commenced. Only three of sixty-six contracted the disease, the failure in these being ascribed to a longer exposure to infection.—*Centralblatt für klin. Med.*

INTUBATION OF THE LARYNX.

Ranke reported to the Congress at Halle (*Rev. des Mal. de l' Enf.*, December, 1891) the statistics of another year's experience of intubation of the larynx. These are more favorable than those of previous years collected last year; the improvement he attributes to (1) having a thead attached to the tube so that the nurse can withdraw it if necessary, (2) improved instruments, (3) greater skill and experience in the operators.

	First Series.		Second Series.	
	Cases.	Recoveries.	Cases.	Recoveries.
Intubation	413 ...	34 p. c.	348 ...	41 p. c.
Tracheotomy.....	866 ...	38 p. c.	237 ...	34 p. c.

Tracheotomy was subsequently performed 83 times in 348 cases intubated during the last year with six recoveries (7 per cent). The 348 cases were collected from the practice of various operators. Bokai, who had treated 109 cases by intubation, thought tracheotomy ought to be abandoned in hospitals. In his cases the tube had been retained for periods varying from 10 to 184 hours. The tubes were changed every two days.—*Brit. Med. Jour.*

HYGIENE.

EXPLANATION OF THE DANGER OF HIGH TEMPERATURES.

At the meeting of the French Association for the Advancement of Science, held at Marseilles, September 18, 1891, M. Maurel, of Toulouse, read a paper on the above subject. "We know," says M. Maurel, "in the first place, that an animal does not survive its leucocytes, and, again, that in man the axillary temperature is lower by 1° or 1½° C. (1.8° to 2.7° F.) than the temperature of the interior of the body. Now, it has been established, experimentally, that a temperature of 44° to 45° C. (111⅕° to 113° F.) kills our leucocytes in a few minutes; that in a temperature of 43° to 44° C. (109⅖° to 111⅕° F.) our leucocytes do not live an hour; finally, that in a temperature of 42° to 43° C. (107⅗° to 109⅖° F.) they may live for three hours, retaining all their activity, and that if this activity becomes lessened they may still, by lowering the temperature, be made to live for twelve hours. These experimental facts explain, to my mind, the danger of axillary temperatures above 41.5° C. (106.1° F.), since this temperature corresponds to 42.5° or 43.° C. (108½° to 109⅖° F.), which will kill our leucocytes, and consequently, also, the human body; it is for the reason that we never see a patient survive a temperature of 42° C. (107⅗° F.). It also explains the beneficial effect of lowering, by 1° or 2° C. (1⅘° or 3⅗° F.) a febrile temperature, since, instead of being in a temperature rapidly mortal, our leucocytes are exposed to a temperature in which they possess their maximum activity.—*La Semaine Médicale*, September 23, 1891, p. 385.

DISINFECTION OF ROOMS.

Dr. Vilandt (*Gazzetta degli Ospetali*, No. 82, 1891) disinfects rooms by means of a mixture of carbolic acid and ethereal essence of turpentine. One or two teaspoonfuls are poured into a tin dish full of hot water, which causes it to rapidly evaporate. This is kept in the patient's room during the whole time of the disease. (A Danish writer records a case of death where a similar evaporating apparatus, with a solution of carbolic acid, was kept boiling in an adult patient's room. The patient was suffering from diphtheria. He presented the symptoms of carbolic acid poisoning—carboluria, acute nephritis and uræmia.—Dr. H. B. Barfod, *Ugeskrift for Læger*, No. 24, 1891).

SYPHILITIC INFECTION THROUGH SHAVING.

In the *Berliner Dermatologischen Vereinigung*, Herr Oestreicher describes the case of a patient who contracted syphilis through a scratch he received in shaving. On the patient, a man about thirty years of age, a papulo-squamous rash was found, which, in addition to very pronounced polyadenitis, mucous patches on the soft palate, falling off of hair, led to the diagnosis of syphilis. The patient did not remember even having had a sore on the genitals. In agreement with this, no scar could be found as the remains of a primary sore. After prolonged search, the author found on the left cheek, at the edge of the beard, a solitary scar-like thickening, which looked like a healed hard chancre; on this side of the head also the submaxillary glands were found much swollen. The patient remembered having been cut by the barber shaving him some weeks before, but could give no account of the further course of the disease.—*Medicinische Chirurgische Rundschau.* May 15, 1891.

MEDICAL CHEMISTRY.

DETECTION OF PEANUT OIL IN OLIVE OIL.

Holde, after a careful trial of the various processes for detecting the above adulteration, gives the preference to Renard's, which he describes as follows: Ten grams of the suspected oil, after being saponified, and the fatty acid separated by hydrochloric acid, are dissolved in 90 per cent. of alcohol and precipitated by sugar of lead. The oleate of lead is separated by ether, and the residuum, consisting of palmitic and arachic acids, is decomposed by hydrochloric acid. The fatty acids are dissolved, with the aid of heat, in 50 c. c. of 90 per cent. alcohol. The arachic acid which separates after cooling is filtered out and washed, first with 90 per cent. and afterward with 70 per cent. alcohol. It is then dissolved in hot alcohol and the solution evaporated in a weighed saucer. The weight of the residuum, after taking into account the acid dissolved in the alcohol, equals the whole amount of arachic acid contained in the oil; the melting point of this residuum should be 70° to 71° C. With this process the author has always been successful; but when the olive oil contains not more than 5 to 10 per cent. of peanut oil, it is necessary to make the test with 40 grams of the former, otherwise the melting point of the arachic acid cannot be estimated. Fur-

thermore, the acids which are separated from the lead salt by hydrochloric acid must be recrystallized repeatedly with 90 per cent. alcohol until the melting point ceases to rise, in case the latter is not found to exceed 70° C. at the first estimation. When peanut oil is present, the melting will always be above 70°.—*Chem. Zeit.*

THYMACETIN.

This name is given by Hoffman, of Leipzig, to a derivative of thymol bearing the same relation to the latter which phenacetin does to phenol. Its chemical composition is represented by the following formula, $C_{16}H_{21}NO_2$—that is:

$$C_6H_2.CH_3.C_3H_7\begin{cases} OC_2H_5 \\ NH(C_2H_3O) \end{cases}$$

It is a white, crystalline powder difficultly soluble in alcohol.

Thymacetin has been found to be a prompt remedy in nervous headache, and is also capable of serving as a hypnotic, though it cannot take the place of morphine. The dose for adults is from 4 to 16 gr. Further reports are promised.

EAST INDIAN COCA.

The coca plant has been cultivated for many years in several parts of the Madras Presidency. It grows like a weed, and the yield of cocaine from the leaves is said to be fully equal to that obtained from the American shrub. Should there be, therefore, at any time a larger demand for this alkaloid, it is said that in Southern India there would be no difficulty in obtaining a very large amount of the leaves. The Government botanist, who reports on the matter, is however, doubtful whether it would pay planters to cultivate the plant in any large quantities at present.—*Chem. and Drug.*

IODINE WATER AND ARISTOL AS SURGICAL ANTISEPTICS.

In the *Bonitchnaia Gazeta Botkina*, Nos. 17 and 17, 1891, p. 407, Dr. Tikhon v. Popoff speaks highly of the antiseptic effects of irrigations with iodine water (1 to 10,000) and consecutive powdering with aristol (pure or in the form of a 20 per cent. mixture with boracic acid) in cases of tuberculosis of joints (fungating arthritis, etc.), and bones, callous syphilitic ulcers, simple chronic ulcers, angina Ludovici, phlegmon, furunculosis, wounds of every description, etc. The iodine lotion also gives excellent results in inveterate ozæna. In addition to its powerful antiseptic properties it has a decided astringent and hæmostatic action. Under its use luxuriant and profusely bleeding granulations rapidly assume a normal appearance, cease to bleed, etc. The iodine water likewise speedily checks parenchymatous hæmorrhage from any recent wounds.—*Brit. Med. Jour.*

TO EXTRACT PTOMAINES FROM URINE.

In a note to the Academy of Science, Paris, Mr. A. B. Griffiths presents the following method of extracting ptomaines from urine in certain infectious maladies: "A considerable quantity of urine is alkalinized by the addition of a little carbonate of soda, and mixed afterward with half its volume of ether. After deposit and filtration, the ether is shaken with a solution of tartaric acid, which fixes on the ptomaines to form soluble tartrates. After evaporation of the dissolved ether, the acid tartaric solution is again alkalinized by carbonate of soda and shaken with half its volume of ether. The ether solution is allowed to evaporate spontaneously. The ptomaines remain as residue.

"*a. Scarlet Fever:* The ptomaine thus extracted from urine in case of scarlet fever is a white crystalline substance soluble in water, slightly alkaline. It forms a crystallized chlorhydrate and a chloraurate. Phosphomolybdique acid produces a white yellowish precipitate; phosphotungstic acid gives a white precipitate; picric acid, a yellow precipitate. It is also precipitated by Nessler's solution. The chemical formula of this ptomaine is as follows: $C^5H^{12}AzO^4$.

"Pure cultures of micrococcus scarlatina, gave the same ptomaine by Gauthier's method.

"*b. Diphtheria:* The urine of diphtheritic cases is also a white crystalline substance. It gives a chlorhydrate and a chloraurate. Tannic acid precipitates it yellow; phosphomolybdic, white; picric acid, yellow; and Nessler's solution, brown. Formula: $C^{14}H^{17}Az^2O^6$. The bacillus diphtheria No. 2, Klebs and Lœffler, gives the same ptomaine in pure cultures.

"*c.* In a case of congestion of the kidneys, the parotid glands and the sub-maxillary glands, a ptomaine, crystallizing in prismatic white needles, was formed. Formula: $C^6H^{13}Az^3O^2$. It is very poisonous.

"These ptomaines do not exist in normal urine, and are truly formed in the economy under the influence of the maladies mentioned."

NEWS AND MISCELLANY.

AN INTERNATIONAL CONGRESS ON SYPHILIS AND PROSTITUTION.

The newest suggestion in the way of congresses is that which emanates from Paris. It is proposed to hold in the French Metropolis in 1893 an International Congress composed of medical men, juryists, hygienists, economists, and sociologists, for the study of questions relating to prostitution and the propagation of syphilis. With such a medley of contributors the proceedings ought to prove interesting.—*Med. Press.*

WHAT CONSTITUTES A MAN.

Dr. Lancaster, a London physician and surgeon, recently analyzed a man and gave the results to his class in chemistry. The body operated upon weighed 154.4 pounds. The lecturer exhibited upon the platform 23.1 pounds of carbon, 2.2 pounds of lime, 22.3 ounces of phosphorus, and about one ounce each of sodium, iron, potassium, magnesium, and silicon. Besides this solid residue, Dr. Lancaster estimated that there were 5,595 cubic feet of oxygen, weighing 12.1 pounds; 105,900 cubic feet of nitrogen in the man's body.—*Journal of Balneology.*

"THE DOCTOR WOULD NOT COME."

Many jurymen seem to be under the impression that medical men are paid officers of the State, and bound to go at everybody's or anybody's call. Mr. Braxton Hicks recently very properly explained to such a juryman at an inquest on the body of a child that doctors were not bound to come when called. And he added when people knew this they would be "more likely to send for a medical man when he could do a person good," instead of waiting till death was threatened. The coroner is quite right. This is not a time for medical men to stand upon their rights or to discuss abstract questions. No profession is more ready than ours with its help and its pity by night or day. But there is a limit even to medical kindness, to say nothing of the physical limits of strength and time. A little more consideration for medical men and medical service will be amply recognized by the profession. This will be shown in two ways, as the coroner suggested—in calling them in early to save life, and not merely to certify the cause of death, and in paying them promptly and with some regard for their calling.—*Lancet.*

INTERLEAVED ADVERTISEMENTS.

Doctors are proverbially good natured and long suffering and bear with equanimity impositions that would move any other class of men to rebellion. This is exemplified in the fact that they continue to subscribe for and read medical journals which insult them with interleaved advertisements. Publishers find interleaving profitable and will continue the habit till the subscribers to their publications express their disapprobation in no uncertain manner.

Cannot the reform idea be extended so as to include this improvement in journals? Readers want the advertisements, and the best men read them carefully and find in them many and valuable hints as to new medicaments and instruments, but no man, when reading of an interesting obstetrical operation, wants to be interrupted by a flame-colored leaf telling him of the advantage to be derived from a kidney cure or rheumatic specific. The publishers must live or journals will not exist. It is desirable that they should live and make money, but they can attain both ends without marring the beauty of their productions by the interleaved advertisement.—*West. Med. Rep.*

TEA AS IN CHINA AND JAPAN.

A death this week of a boy, aged 7 years ("shock produced by hot tea without milk") forcibly and sadly emphasizes the particular vice of the ordinary English method of drinking tea. The tea had been left for some time "in the oven to warm," that is to say, it was a strong decoction of tea leaves to which time had been given to extract all the tannin, and which had then been rewarmed. It was then drunk without milk, that is to say, the tannin was not converted into a relatively harmless albuminous tannate by the addition of milk. It is precisely because our English method of "making tea" from such infusion of tannin as well as of theine that tea is so injurious to the digestion, and as in this case, when taken in unusual strength, on an empty stomach, and without milk, becomes an irritant poison. No people who know how to make tea use milk with it—neither the Chinese nor the Japanese; but then the hot water (not boiling!) is poured on to and off the leaves at the table, as soon as the liquor becomes of a pale straw color. The pot is always a small china one, and the hot water kettle is brought alongside it on to table. Half a minute suffices for the first infusion. It is a very grateful and refreshing beverage this "honorable tea" which one sips at fre-

quent intervals in the far East; but of course it would be, and is, insipid and not worth drinking if its flavor be drowned by sugar and milk. No people in the world drink so much tea or so often as the Japanese, and Europeans in Japan easily fall into the same habit. No word is ever heard of its being injurious or a source of indigestion, but that is because they take care not to extract the tannin from the tea leaves, and we take great care to do so. That is why we say persons who live on tea and bread-and-butter have weak digestions, and why this poor boy was poisoned.—*Brit. Med. Jour.*

CREMATION, BURIAL AND EXHUMATION.

In *The Lancet* of January 2, page 42, in an annotation on burial reform and its legal regulations, it was observed that "no other method can ever so fully satisfy the possible needs of a criminal investigation as that which allows the exhumation of the body." While fully maintaining the soundness of this position, it is at the same time most important that this should not be made any excuse for haste, carelessness, or an undue desire to oblige in the giving of a certificate of death on the part of medical practitioners, in registering a death on the part of registrars, or in burying without a burial order on the part of cemetery or churchyard officials. For although the body may remain in the ground and be available for exhumation, post-mortem examination, and chemical analysis, all these may be in vain, and a medical certificate given with an imperfect knowledge of all the circumstances surrounding the last illness, followed by a hasty burial, may defeat justice as completely as if the body had been cremated. This must be rendered more probable if burial reform grows in favor as it is hoped it will. For although much valuable information may be obtained by an examination of bodies even in an advanced state of decomposition, and though toxicological science may detect poison after months and even years of burial, still pathological and chemical research both have their limits, and some poisons could be named which would defy detection even within a short period after death. In every or any case of death from poison or other unfair means, it is much better to detect this before rather than after the body has been committed to the grave. The two following cases will prove the truth of the preceding remarks. For obvious reasons the names of persons and localities are suppressed. Some years ago a man went to his work in his usual health, at his usual hour one morning. He returned to his dinner, after eating which he was seized with convulsions and died. A surgeon examined the body and gave a certificate, and the body was buried. Some weeks after suspicious circumstances came to the knowledge of another surgeon, who succeeded in causing the exhumation of the body, its examination, and the despatch of the viscera to an eminent analytical chemist. Strychnine was indicated by the symptoms as the poison which had caused death, but it could not be detected even by the most refined processes adopted by the analyst first employed, nor by a second one to whom the viscera were also sent. The bodies of two children whose deaths occurred previously were also exhumed, but the chemical inspection of the viscera was also negative. A person was put upon trial for murder, but although the case was a most suspicious one, the non-detection of poison was fatal to a conviction, and the prisoner was acquitted. In the second case a child died under circumstances which aroused the suspicions of one of the two medical attendants, who were respectively a retiring and a remaining partner. The former was dissatisfied with the mother's manner, and puzzled with the symptoms, which were not those of any natural form of disease incidental to childhood. A second child died very soon after. and a certificate was given and the body buried. Later on the husband and father was taken seriously ill with similar symptoms but fortunately was saved by copious vomiting and violent walking exercise. Lastly the wife and mother was also suddenly seized with similar symptoms, and arrested on a charge of attempted suicide. Then followed a full inquiry, with examination of the two bodies and the detection of morphia. The prosecution had to contend with the difficulties which will always arise where a charge of murder is preferred some time after the death of the victim, and when the circumstances are not fresh in the memories of the various witnesses, and the woman was acquitted. Still greater is the difficulty when a medical witness has to avow having given a certificate of the cause of death which was palpably incorrect, when those who make the necropsy have to deal with a decomposed corpse, and when the analyst endeavors to detect a vegetable alkaloid under circumstances very unfavorable to its discovery.—*Lancet.*

Telephonic—"Is this 257? Oh! doctor, my husband wants to go down to business, but I told him this weather is only fit for beasts! Won't *you* come over and persuade him to stay indoors?"—*Yale Record.*

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CLINICAL LECTURE.

THE TREATMENT OF SEVERE PHLEGMONS.*

By PROFESSOR HELFERICH,
OF GREIFSWALD, GERMANY.

Gentlemen: As far as we are compelled to resort to surgical interference, it is always a chief aim to avoid any possible infection of the wound. Further, in all cases of infectious or septic inflammation, it is our one endeavor to bring the infectious process to an end as speedily as possible.

Without question our knowledge of these subjects has been broadened of late years, and this assertion is amply proven by the single fact that the number of infectious phlegmons, or septic traumatic infections is infinitely less than what it was not many years since. Nevertheless, the number of these cases which, either from neglect or ignorance, have been allowed to run on, and are brought to the attention of the practitioner is still very large. A glance at recent medical literature, especially as set forth in medical journals, will show that in spite of the many recent advances in modern surgery, the therapy of this subject has been but little studied and has not received the attention it has merited. For this reason I feel justified in devoting this lecture to a consideration of so all-important a subject, trusting only that the experiences here set forth may be a guide and a help to you, and perhaps ultimately stimulate you to individual researches.

My own experiences with the subject have been very extended. It has been a peculiarity of my experiences in Greifswald that an unusual number of cases of seven phlegmonous processes, as well as eight cases of acute purulent infiltration, have come under my care—far more than I ever saw while either as assistant at the Leipzig Hospital, or occurring among the large amount of material that came under my care in the Polyclinic of Munich. It may be that the impoverished condition of the people is a factor in this peculiarity, but apart from this it is undoubtedly a fact that these as well as analogous infectious processes — such as acute purulent osteomyelitis — occur with much greater frequency here than in the other places mentioned. Under these circumstances the treatment of cases of severer phlegmonous inflammations, although different in individual cases, must still be regarded as more or less typical, since certain rules have not only always been adhered to, but have as well been always indicated.

In the closer consideration of this subject, we will take, for instance, cases of phlegmonous inflammation of the hand and forearm, which have been caused, we will say, by an insignificant puncture wound of the little finger, and which has rapidly spread. Immediately after the admission of such a case, its only place is the operating table.

If we are right in following the old rule, viz., that an incarcerated hernia demands immediate treatment, and a release of the incarcerated bowel, then such an action as immediate surgical interference in acute phlegmonous processes is most assuredly indicated, There is absolutely no need of putting such a patient to bed upon admission to the hospital, even though his arm be well bandaged and supported. A spreading of the infectious process, together with the continuance of the absorption of the poisonous, fever-producing products of the septic inflammation would only be the result, not only injuring the general condition of the patient and jeopardizing the life of the tissues, but also increasing the risk of a subsequent, and very possible lethal termination of the disease. An immediate operation is, therefore, the only rational indication in such cases, and as soon as the case has been satisfactorily diagnosed, preparations for the operation should be at once commenced.

*Translated from the *Berliner Klinische Wochenschrift.*

The patient should be first bathed, if possible, and then placed upon the operating table in a convenient position. It will be of value, also, to see that the arm is accessible both from the dorsal and the inner side. For my part I make it a practice to place the entire arm upon a small table placed at the side of the one upon which the patient lies. This arrangement I have found to be most convenient, and greatly facilitating the operation. After the patient has been thoroughly anæsthetized, the skin of the arm and fingers is carefully washed and scrubbed with hot soap and water, and shaved, and finally rendered antiseptic by the use of disinfectants. The arm is then elevated until it is perpendicular, and without any further manipulation, or stroking, an Esmarch's rubber is placed around the arm below the shoulder, and the limb thus rendered bloodless.

There is, perhaps, no other operation, in my opinion, in which I consider a bloodless condition of the limb of such importance. If this condition of bloodlessness is considered indispensable in the operation of sequestrotomy in order to be able to trace the course of small fistulæ, I would also declare it indispensable in this operation where an exact knowledge of the extent of the spread of the suppurative elements, as well as the tracing of small isolated foci of suppuration, is of the greatest possible importance. Even œdematous swellings of the upper half of the arm, do not restrain me from the applications of the Esmarch's tube or bandage. I have never observed any harm to follow its use. If the phlegmonous process has reached as far as the shoulder, we have, in the majority of cases, a condition in which the conservative surgeon can generally be of no value, and in which the question is either one of exarticulation or amputation.

We now may proceed to make our initial incision, which should be done after making the arm tense. As as illustration we will presume, as I have previously stated, that the initial point of infection is upon the fifth finger. The incision should begin at the point of infection, and should be continued in the direction of the length of the finger, rather to one side of the flexor tendons. An assistant should then pull the edges of the wound apart with small hooks, as otherwise the field of the operation can not be seen sufficiently clearly. If the pus channel within or close to the sheath of the tendon, it will be well to insert a sound or grooved director, and to increase the incision by cautiously cutting down on this with the knife or scissors. In this way the incision is gradually enlarged until it reaches the palmar surface of the hand, through which it is continued, care being taken to avoid any injury to the tendons, nerves, and larger vessels. The *ligamentum carpi volare* is then reached and cut through. In phlegmonous processes originating in the little finger, the suppurative process will be found to be located on the ulnar side of the common flexors, and the incision should be continued in this direction; which, if we are dealing with an infectious process originating on or near the thumb, we will find that the suppuration will be confined nearer to the radical side of the forearm, and our incision should be enlarged in this direction.

Often we will find incapsulated foci of suppuration between the muscles, and perhaps even under the deep common flexor of the fingers so that the interosseal fascia will have to be opened. In all cases the incision should be extended up the arm until both ocular examination and palpation convince us that healthy tissue has been reached.

The entire operation should be performed with great nicety, care being taken not to injure the edges of the wound, and also not in any way to injure or tear the infected tissues, and doing so to increase the liability to a continuance of the septic process. When necessary other incisions should be added to the main incision, and these may be located either on the palmar or dorsal surface of the hand, as the case indicates.

The goal we are striving for in the performance of this operation is complete eradication of the phlegmonous process by the single operation, so that no subsequent surgical procedure may be necessary. For years past, in discussing these subjects before my students, I have made use of the following expression: "Our honor as physicians demands that we should cause a stoppage of the infectious process by a single operation." In fact, our honor is in the maintenance of our patients' best good, and to this end it is by no means immaterial whether they be kept under the influence of such a poisonous process for a long or short time. On the contrary the local as well as general condition of the patient is endangered more and more every hour the infectious process continues.

If the operation as described by me is successful—and it fortunately usually is—the patient will be free from fever and convalescent within a very few days, or at the most three days.

I am a strong opponent to any other treatment of these septic processes. I have never seen good results from a simple puncture of

the infected parts, and small incisions with drainage accomplished but little more. Regarding drainage, it is in many cases absolutely prejudicial, since the rubber drainage through erosion, may lead to arterial hæmorrhages, the opening of tendon sheaths, and, indeed, to a serious impairment of the joints of the hand. The only place I think the use of the drainage tube is at all admissible is from the highest point of the incision if on the flexor side of the fore-arm and extending nearly to the elbow, and protruding some distance further down.

The operation having been completed, we now come to a consideration of the traumatism thus produced. For some time past *I have omitted all disinfection of the wound.* I was first awakened to the possible value of this omission on purely theoretical grounds, and have since had ample opportunity to demonstrate the correctness of this theory by numerous practical tests. Why should we wish to injure or even perhaps cauterize the tissues, when upon the recovery of their strength and health rests the entire success of our operation? Why should we seek to further injure the already severely poisoned organism by causing the absorption of disinfectants? So, after the operation I limit myself to a gentle douching and careful washing of the parts with a six per cent. sterilized solution of salt and water; and this only in order to completely remove all blood and matter from the wound. By the adoption of this precaution the probabilities for the ultimate success of the operation are greatly enhanced. Further grounds for this method of treatment tending to show the inutility of the antiseptic treatment of the wounds resulting from the operation for phlegmonous processes, I do not think are either necessary or called for. Yet we know from the writings of many eminent surgeons and investigators that the action of disinfectants upon the kidneys can be a most unfavorable one and maintenance of a healthy and active condition of the kidneys is of greatest importance in cases of septic infection. The local action of disinfecting douches in insufficient operations is entirely illusionary; in thorough and extended operations it is entirely unnecessary.

Now comes the bandage, which should be applied if possible while the patient is under the influence of the anæsthetic, and after all the visible vessels have been tied. This consists, primarily of the introduction of one large or several smaller pieces of iodoform gauze in the wound, so that all crevices and cavities are covered by a layer of the gauze. This application of the iodoform gauze should be executed with great care and nicety. A large quantity of the gauze is not required—one layer over the tissues being amply sufficient. By this the superficial healing of the wound is guarded against, and free exit of secretions from the deeper portions is assured. Sterilized gauze would answer the same purpose if it would keep in place and unchanged, but in these very particulars iodoform gauze is vastly superior, since it will keep in place, while the superficial dressing and bandage can be daily changed. In about a week this gauze will become loosened and as a rule under it will be found normal granulating surfaces.

The subsequent indications for treatment are but simple. Over the superficial wound, and surrounding the limb, should be applied a moist warm dressing, the dressing being preferably moistened with Thiersch's solution of salicylic and boric acid (1.0 to 15.0—500.0 grammes). This dressing will prevent the decomposition of the secretions it absorbs.

Over this should come "protective" or gutta-percha paper, and then the limb carefully placed in a well padded arm rest or splint in a natural and comfortable position.

The constricting Esmarch's bandage having now been removed, the arm is held in an almost vertical position in order to avoid possible hæmorrhage,and to favor the recovery of the tissues. After three or four hours the arm is lowered to a moderately elevated position upon a pillow. The dressings should be removed the next day, but the iodoform gauze not disturbed.

If such a treatment is strictly followed, healing will result more rapidly than when treated by any other method. The wound will develop normal granulations, and the necrotic parts will be thrown off.

It is of the greatest importance to the definite result of the healing that this condition of the wound shall be brought about as speedily as possible. As soon as the entire wound is evenly covered with granulations, or the small necrotic portions can be removed by excisions, it can be regarded as an aseptic wound. Nothing stands in the way of its secondary healing, on the contrary it offers the best possible promises for an ultimate complete restoration of all the functions of the hand and arm.

Concerning the importance of and the method of making the suture of the secondary wound in these cases, I have already spoken in the *Münchener Med. Wochenschrift,* some time since. Its successful performance in healing wounds following phlegmonous infections is a point of great importance, and one upon

which the final result of operation greatly depends.

It will be self-evident from examination, as to what degree a freshening of the edges of the superficial wound will be necessary in order to insure a good union. The granulations should be removed to a great extent with the handle of the scalpel, in order to insure a healing of the wound without an intervening cicatricial tissue. The more thorough the preparation of the edges of the skin, and of the wound itself, the better. This not alone for the sake of rapid healing, but because every cicatrix, apart from its tendency to contract, forms a vulnerable point which might very probably lead later to an erosion with subsequent reinfection. A quick healing might also be obtainable by transplantation, but unless absolutely necessary this should not be done, as the results offered by it relative to the ultimate motility and use of the limb are not nearly as good as those held forth by a healing by first intention.

The edges of the wound are now cautiously brought together by sutures, and small drains may be placed in the deepest portions. Tension should be avoided as much as possible, as the stitches easily cut through the skin. It is well, if necessary, to reinforce the stitches with strips of adhesive plaster,

The rapid healing of this wound is now of great importance, so that a mobilization of the hand and fingers may be commenced early. For this latter purpose all the modern aids of value can be applied, including passive movements, bathing, active movements in the water bath, massage, electricity, compresses and fixation in different positions at night. A very valuable addition to our armamentarium in this respect, is the apparatus designed by Dr. Krukenberg, which consists in the application of a pendulum to stimulate and restore the motility of the hands and fingers. Caps or rings are placed upon the fingers, to which a pendulum is attached, and the latter set in motion. Apart from the direct utility of the apparatus, which I most heartily recommend, it will prove a most agreeable occupation to the patient, who can thus be busied in restoring the motion of the joints of hand and fingers. I know of no other procedure so effective and valuable, and I use the apparatus constantly in various modified forms in my polyclinic.

I would have been pleased to show you today one of my most recent cases of phlegmonous infection, but, unfortunately, the patient, who is a man, is compelled to be at work, and so I must content myself in calling your attention to these photographs of his hand. (Demonstration.)

Apart from a slight contraction of the little finger, the flexor tendons of which were necrotic, the hands and fingers are perfectly normal, both in appearance and motility. The patient, a working man, 32 years old, was admitted to this clinic on the sixth of March, and operated upon at once. The phlegmon had appeared after a slight injury to the little finger of the right hand, which had occurred on Feb. 27th. On admittance the hand and fore-arm up to the upper third, were greatly swollen and tense; the axillary glands were as large as hazel-nuts, the temperature 39.10 C. The patient was immediately anæsthetized and the arm rendered bloodless. The skin was freely divided from the seat of the injury to some distance beyond the volar carpal ligament, the latter being cut through. The incision was made on the ulnar side of the hand and arm, and care was taken not to injure the ulnar nerve. The flexor tendon of the little finger was found to be necrotic. Pus pockets were found between the muscles, and on the inter-osseous ligament, as far up as the upper half of the fore-arm. After complete division of the skin over the infected parts, they were washed with the sterilized salt and water solution (6 per cent.); then a dressing as previously described was applied. On March 7, the day after the operation, the temperature had fallen to 37.3° C. in the morning, and 39.5° C. at night. March 8, temperature 37.6° in the morning, and 38.8° at night. After March 9, there was no fever.

On March 18, the granulations were scraped off and the wound entirely closed, except at one point on the little finger. Healing occurred quickly and good movement was obtained. The patient was discharged on May 4.

The patient was again seen on August 24, and both the appearance of the hand and fingers, and the motion and strength found to be entirely normal. There were no erosions. It will now be very evident to you why I, in the treatment of these cases, have laid such stress upon the quickest possible production of an aseptic wound, as the key to ultimate success, functionally and otherwise.

Various questions now arise. Is it possible to obtain absolute asepsis at a single sitting, and at once to proceed to close the wound? This, without doubt would be the ideal procedure which *a priori* we are striving after, but in practice can the desired end be thus accomplished? I would acknowledge the possibility of this being true in cer-

tain cases, but believe that in the majority the results would be most disastrous, not only locally but generally, and, therefore, I cannot look upon such a method as either rational or justifiable. The *non nocere* is more important in this instance, in the majority of cases, than the dazzling promises of uncertain results in a few.

All that has been said in this lecture can be applied to the treatment of analogous phlegmonous processes in other parts of the body. On the subject of operations for acute purulent infiltration, I would like to add a few words. In these cases only the most energetic treatment can save, and the question is not one of saving an extremity, but of saving life. I have been able to save some cases in which the septic process was already very far advanced.

A clearer idea may perhaps be obtained by the recital of a case of a boy, which was, as far as the local condition was concerned, the most severe I have ever met, and I take pleasure in showing you photographs of the same. This infiltration extended from the calf of the leg to the pelvis. A portion of thigh seemed almost gangrenous. I made several longitudinal incisions, about an inch and a half apart from each other, and thus forming strips of skin which subsequently contracted, and removed a large amount of pus and cellular tissue infiltrated with pus. The boy made a good recovery, although transplantation was necessary in order to effect a complete closure of the wounds. The boy, now 16 years of age, is entirely well and strong.

I might quote you many similar cases which resulted favorably—others again in which there was a lethal ending in spite of our most energetic treatment.

The prognosis of severe local septic process does not depend solely upon the age or strength of the patient. It is far more unfavorable if we are dealing with heavy drinkers, or if the kidneys are in any way diseased.

Nevertheless, the surgical treatment in all cases of phlegmon constitutes our most valuable treatment of this disease, and I shall be pleased and satisfied if this lecture will tend to stimulate you to study in this direction, or aid you in the successful treatment of such septic processes.

The number of micro-organisms in a fluid, milk for instance, may be greatly diminished by subjecting the same to centrifugal action. Some germs are more readily removed than others.

CLINICAL FEATURES OF THE PRESENT EPIDEMIC OF INFLUENZA.

By JAS. M. ANDERS, M.D.,
PROFESSOR OF MEDICINE, MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA.

Gentlemen: I desire to call your attention this morning to some cases illustrating different forms of influenza. The cases will also show some of the complications of this disease.

Case I. Male, 35 years of age; born in Ireland, occupation fireman, was admitted on the 29th of December last. Family history is as follows: Father died of paralysis; mother living and healthy, brothers and sister living and healthy. He had all the diseases of childhood; fair health previous to last illness; has been a hard drinker. Six weeks ago the onset of the present attack occurred, when he thought he had taken a heavy cold. He began to cough and sneeze a great deal; shortly after his knees became painful and swollen, the right ankle was also somewhat painful and slightly swollen. He had pains at the same time in the head, back, and left side around the heart. His cough became frequent, dry, and he expectorated very little.

Now, gentlemen, from the history of this patient there is no doubt that the man had an attack of influenza, which has developed very interesting complications. The first of the latter to which I would like to call your attention is the condition of the joints. He had, as you will recall, pains and slight swelling of knees and one of the ankle-joint. This you will see is a picture resembling closely cases of rheumatism. But, gentlemen, in cases of influenza we encounter conditions exactly similar to the one we have met with here. In these instances you will find very little, if any, disposition of the trouble to change from one joint to another, and, as a rule, no cardiac complications, which occur so frequently in articular rheumatism. We must bear in mind, however, that we do meet with cases, and not a few, in which there may or may not be joint symptoms, and yet, we may have cardiac murmurs present. This is not due to valvalitis, but due to an altered condition of the blood. The next interesting complication in this case, and one which I have very frequently met with during the present epidemic, is acute pharyngitis. In some cases, both tonsils and the palatine arches are affected, and are the seat of follicular ulcers.

The temperature it is interesting to note, notwithstanding these two complications of

considerably severity, has not been much elevated. That is one of the peculiarities of the prevailing epidemic, viz., a low temperature. In young persons who were previously in good condition, the temperature did become elevated, but very often not to any great extent, in spite of several forms of complications.

Case II. The next patient is a female, born in Germany, occupation, domestic. Her father and mother died during her childhood; one brother died of phthisis and one of dropsy. She has had the diseases of childhood. Seventeen years ago the patient had the same condition as at present, she thinks. She is married, has two children, and has had no miscarriages; menstruates regularly. One week before admission she had pain in head, back, and limbs; stools yellow in color. Temperature on date of admission 102⅘°, afterward 103⅘°, subject, as you notice on this chart, to marked irregularity. The pulse was rapid, respirations were rapid and decidedly panting in character; eyes bright; pupils dilated; tongue coated with a heavy white fur; tenderness over abdomen, but no distension; cough, dry, hacking; expression, cyanotic; consolidation at both bases. Second day after admission; sputum rusty, pain and tenderness in abdomen still, some distension; consolidation at base of lungs; urine showed hyaline casts with considerable albumen; the bowels were moved several times within the twenty-four hours, stools thin, ochre in color, offensive odor.

In order to go as briefly as possible over the history of this case, we may mention, at once, that it presents three features of decided interest.

In the first place nearly all her local symptoms were referable to the abdomen. She very soon, however, developed a severe complication of the lungs, namely, lobar pneumonia. Then she also had renal symptoms, which are of decided interest. Now, from the history of this case, and from an examination of her urine, we may justly conclude that this patient was suffering, before the date of the onset of her influenza, from a latent form of Bright's disease; for, while we do find albumen, epithelial and hyaline casts in influenza, we do not find granular casts, as a rule. But the point to be borne in mind is that when a subject of this sort is attacked with influenza, all the former minor symptoms become very much intensified, and you are apt to have very severe complication attending the attack of "grip."

We did not think this patient would progress anything like as well as she has. Indeed, the prognosis of all cases of this sort, in which you have associated latent Bright's disease and lobar pneumonia as a complication, more especially when the latter is double, is highly unfavorable. Now, we are not quite sure whether this woman had Bright's disease previous to the onset of this trouble; I have given you my reasons for thinking so. There are cases in which there had been no previous trouble with the kidneys, and yet well marked renal symptoms, as in this case, have developed during the attack. In such cases the urine becomes normal as soon as the patients have fully convalesced.

I wish to refer to one other point; from the history you will notice that she had many symptoms of typhoid fever. Oft-times at the commencement of influenza, you may be puzzled to decide whether you have a case of typhoid fever or influenza to deal with. In all cases where you have symptoms that excite suspicion of typhoid, as we have here, you should be on the look-out for the more characteristic symptoms of typhoid fever. As long, however, as you do not have swelling of spleen or the characteristic eruption you will not be justified in making a diagnosis of typhoid fever, however closely the symptoms simulate those of the latter disease.

This woman still has a great deal of tenderness over the abdomen, and this reminds me that I should speak of another interesting feature in connection with her case. You may touch her almost anywhere and she gives signs of pain. Now, what does this mean? Hyperthesia of the skin, another interesting complication of the influenza. You do not meet with it very frequently, but when you do you have a very valuable diagnostic symptom.

Case III. The next patient that I wish to bring to your notice is one that also illustrates that grave lung complication, namely, lobar pneumonia, but there are other features of great interest not presented by Case II.

The patient's initials are J. C., born in England; no occupation; weight 135. Mother died of phthisis, father of paralysis. Had diseases of childhood, and four years ago had rheumatism.

Three weeks ago had sick stomach, pain in back, stitch in left side, legs swollen; was not confined to bed. On admission had consolidation of most of left lung; cough troublesome, breathing labored, somewhat panting, temperature 101°; heart's action frequent, weak and irregular, and presence of mitral systolic murmur. Now, the history of this case up to January

1st was similar to the one which has just been taken out. We had here the back-ache, fever, and note especially what we have had in all the cases, pain in left side around the heart. In almost every case that I have met with during the present epidemic, this symptom, namely, the stitching, burning pain has been more marked on the left side than on the right. You will also notice that this patient developed lobar pneumonia at the end of one week. And here let me lay stress on the fact that lobar pneumonia is a complication which is very apt to come on late in the disease, most frequently during convalescence.

Now in connection with this case of lobar pneumonia, I wish to call your attention more especially to the condition of the heart. Remember, from the man's history, we learned that he had acute rheumatism four years ago; he also gives a syphilitic history. Under these circumstances we would be likely to find chronic valvular disease existing. Doubtless, this was true of this young man before he developed influenza, because we have here on palpation a decided thrill, and on auscultation, a murmur which is systolic in rhythm and harsh. We cannot outline the heart very well by percussion on account of the dullness to which the consolidation gives rise, but we have sufficient physical signs to enable us to make the diagnosis of chronic valvular disease. It is not strange then that when admitted he should have had a very feeble, rapid pulse; it is not strange that he should have developed swelling of the feet the moment he was stricken with the influenza. Even where perfect compensation has existed before the onset of influenza in valvular disease, you are very apt to have dilatation of the right side, followed by swelling of the feet, and other evidences of failure of compensation. This ensuing case then, illustrates the fact that in persons suffering from chronic valvular disease of the heart we see grave forms of influenza attended by the graver kinds of complications, namely, broken compensation, lobar pneumonia, etc. It is well known that where you have right-sided dilatation and the patient becomes affected with influenza, you have a very grave form of the disease, but I do not know it to be stated in text-books that where you have chronic valvular disease, dilatation and dropsy are apt to follow. The heart should be carefully attended to from the onset of the disease.

Case IV. J. W., aged fifty-four, born in America; occupation laborer, admitted to the male medical wards of the Philadelphia Hospital January 6th, 1892. Family history negative. When quite a boy while skating was precipitated into the water through an air hole; following this he had articular rheumatism which has made him a cripple for life.

Present illness began with severe pain in the head, limbs, back, and chest, especially, however, in the head, and in the right shoulder, and again in the region of the heart. On examination at time of admission there was found consolidation of right apex; expectoration thick, yellow in color, not rusty; cough troublesome. This man we learn, began with cough accompanied with slight expectoration, cough loud and ringing as we find it in many cases of influenza. In many instances of influenza, especially at the beginning, the severe paroxysms of coughing much resembled whooping cough.

But there is another set of causes in which the initial condition of the tubes and larynx is a state of intense irritation, followed by a genuine bronchitis. Since we have in this case, in addition to a small area of consolidation, the history of bronchitis, from the beginning of the attack, lobular and catarrhal pneumonia may safely be diagnosticated.

Some contend that you have first collapse of a portion of the lung, with congestion around the seat of the collapse which leads to consolidation. The cause of this collapse and congestion it is contended is enlargement of the bronchial or tracheal glands or both, associated with marked disturbance of the great nervous tract at the root of the lung.

Few men in the profession are, perhaps, familiar with the fact that if we make percussion over the four upper dorsal vertebræ you get normally tympanitic or tubular resonances, while below this point, i. e., the fourth dorsal, you get a more nearly normal resonance. When you have a case of inflammation of the bronchial and tracheal glands you have a decided dullness down to the point at which the bronchi bifurcate, the lower edge of the fourth dorsal. The complication lobular pneumonia is more frequently met with in influenza than lobar pneumonia.

Case V. I will simply relate to you very briefly the notes and show you the temperature chart of this patient, without troubling you with the physical signs.

The patient was convalescent, but exposed himself on the night of January 1st, this was followed by pain in the back, head and chest a severe rigor, cough and greenish-white sputum at first, afterwards somewhat rusty. Consolidation of the base of the lung and apex of the other side was noted on admission. This is a very interesting condition. This is also a case of lobar pneumonia. From the temperature chart you will observe the

temperature reached 104°, and having kept at that height for five or six days we may now soon look for a crisis. This case also illustrates the fact that the consolidations are apt to be double in influenza, and bear in mind too, if you please, that this case developed lobar pneumonia three weeks after the onset of the influenza.

Let me briefly in conclusion call your attention to the treatment of this disease, influenza. In the first place we hear a great deal about arranging all the cases into two or three large categories or types. Now, the present epidemic better than the one that prevailed two years ago shows how impracticable this proposition really is. There are too many cases in which the types merge into one another. It is far better to arrange them into classes according to the severity of the cases, according to Wilson's suggestion. There is no doubt that there is a very large class of cases which never betake themselves to bed; on the other hand there is a middle class in which the temperature is pretty high, the patient betakes himself to bed and remains there from three to five days. Then you have the graver form of the trouble in which you have the serious complications arising.

The milder cases require little or no treatment. Let the patient keep warm, taking possibly quinine in moderate doses. Tell them to abstain from meats. Never give hot drinks except on the first day. If you fail to abort the attack they increase the pain, and more especially the headache. Give cooling drinks.

The second class of cases are those who have considerable fever with catarrh of the bronchia, or of the stomach, or possibly other organs. Now, these require a special form of treatment; not very often are we required to use antipyretics with the object of reducing the temperature. We have, however, a good remedy in quinine. We give as much as 12 to 16 grs. a day. If there be headache and lumbar pain you may combine about 3 grs. of phenacetine in the dose. Treat the catarrhal element actively according to general principles.

We have now to consider the treatment of the graver forms of this disease. We must here, at once, institute the antifebrile regimé. The diet should be milk, beef tea, animal broths, etc., given at stated times. The feeding is very important in these cases, because there is a longer temperature curve and great physical depression. Give strychnine and alcohol, with quinine to support the system, avoiding depressants. Morphine for the pains. Treat the complications as you would if they were under other conditions. I want to call your attention to a few of the unusual features of the present epidemic. And first, it is to be noted that the temperature curve is unlike that met with in former epidemics, in some particulars. Thus, I have seen not a few cases that began with a temperature of 103° or even 104° F., which almost at once declined steadily to the normal, to remain so, the whole attack lasting 2 or 3 days. Apparently little or no local catarrhal conditions developed in these cases.

We have a temperature curve of influenza noted by DaCosta, which for a day or two is high, then a steep decline, a rise again to almost the former height, then following this an irregular temperature tending back to the normal. This is rather unusual. We have also a temperature which is much like that of typhoid fever. Now I find that in the cases, like the one that has just gone out, with a temperature chart resembling the typhoid curve, one or more complications present, such as lobar pneumonia, lobular pneumonia, enteritis, etc., which would explain the continuance of the high temperature and cause it to resemble typhoid.

The throat complications are numerous this year, including follicular and necrotic tonsillitis. We see in the present epidemic of influenza, suffocative attacks, and we also see a great number of cases of active bronchitis and superficial laryngitis. Aural troubles are also common, being secondary to the throat troubles.

Lobar pneumonia seems to be entirely independent of the bronchitis though very frequent. Lobular pneumonia is more frequently seen still. The latter complication is often preceded by an active form of congestion.

I would also call your attention to the nervous phenomena of the disease as compared with those seen during the epidemic that occurred two years ago. There is no doubt in my mind that we have more tendency to depression of spirit, more irritability of temper. We see during the present epidemic in a greater proportion of cases, a mild, and not rarely an active form of delirium. And again, I have noticed that convulsions occur. This was seen by me in two instances, and other physicians have met with about the same proportion of cases. Vertigo has been present in nearly all of my cases. In the present epidemic children were numbered among the victims from the first, while in the former, children were stricken down toward the close. Much more might be stated on this head, but as the hour has passed, time will not permit.

COMMUNICATIONS.

EPISCLERITIS.

By ARTHUR D. MANSFIELD, M. D.,
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Episcleritis is a very rare form of disease, seen only occasionally in our clinics, but when observed presents clear and distinct symptoms.

In most diseases of the eye the diagnosis is absolutely certain and very little, if any, doubt is expressed, and in this form of disease under consideration the diagnosis of scleritis is made upon the objective symptoms and not upon those of a subjective character. We see for ourselves what the trouble is and make the diagnosis perhaps without even asking the patient a single question.

The history of the case is usually one of some length of time in which more or less treatment has been tried, without any appreciable benefit, even perhaps failure and increase of the trouble, in which the pain continues increasing at times, then subsiding somewhat. Some redness and inflammation restricted in area to one of the quadrants of the globe and near the cornea, the inflammation not having the general appearance of ordinary conjunctival inflammations. Pain is experienced by the patient on pressure and there is more or less swelling. So much for the history of the case.

The diagnosis is easily made from the knowledge of the history. The patient has painful vision, photophobia, pain on pressure, when applied directly over the inflamed and swollen area.

The area of inflammation extends over a quarter or less of the superficial area of the eye, or may be located at a very small point, usually, however, it is scattered over a larger area. The inflammation may cause more or less œdema of the conjunctiva immediately over it. Suppuration very rarely occurs, at least I have never seen any case go on to suppuration. Vision is impaired in most of the cases to some extent; the disease is usually restricted to one eye ball; there is always a predisposition to subsequent attacks. It is seen usually in middle adult life between the ages twenty-five and thirty-five. My observations have shown me more cases in the right eye than in the left; however, I see no reason why either eye should be predisposed and hence attach no importance to the fact.

The differential diagnosis is to be made between episcleritis and scleritis, the two being indissolubly bound together, and in reality are only inflammations of contiguous tissues. The differential diagnosis is always difficult, and as there is no necessity of multiplicity of diagnoses the two may as well be considered as the same disease.

To an oculist it is hard to confound anything else with episcleritis, yet we are not all oculists, and to those who are not I make the following differential diagnosis. It may be possible to confound episcleritis with phlyctenular keratitis or phlyctenular conjunctivitis. The episcleritis presents a uniform redness as far as the area extends and seems to be an inflammation of a tissue covered by a healthy tissue, such as a thin mucous membrane like the conjunctiva. And such is the case—the sclera is inflamed and reddened, while the conjunctiva is comparatively speaking very healthy. In episcleritis we have severe pain on pressure, there is swelling and diffuse redness, and it usually occurs in adult life with a history of rheumatism.

In phlyctenular keratitis, the area of redness is localized, is a point to which blood vessels run and from which they ramify in all directions, the phlyctenule or small pustule is located on the edge of the cornea or on the corneal border of the conjunctiva; the phlyctenule is depressed at the top and exudes purulent matter.

The conjunctiva is affected, and the inflammation seems to be superficial, and not covered by any upper tissue, the same painful vision exists, and light is avoided, darkness being a relief to the eye. Like episcleritis the disease occurs in children and not in adults, and usually in children of a strumous diathesis. In phlyctenular keratitis, there is none of that pinkish congestion seen in keratitis (I mean the simple keratitis) which in reality is a congestion of the scleral vessels around the cornea which is so characteristic of keratitis and iritis. Pressure brings no pain in phlyctenular keratitis, though the patient may suffer pain locally.

These in brief are the main points of differential diagnosis between episcleritis and phlyctenular keratitis. There are other forms of disease which might be confounded with episcleritis.

The Ætiology of Episcleritis: It is a very well-known fact in general clinical medicine that the rheumatic poison has a peculiar liking for and tendency to invade fibrous tissue; we see this in the fact that rheumatism attacks regions mostly composed of fib-

rous tissues, such as the joints. We also know that the sclerotic coat of the eyeball is composed entirely of fibrous tissue, and I have often wondered why we do not see more of episcleritis than we do. Owing to the fact that rheumatism exists in so many cases, and is so severe in a majority, why does the inflammatory virus, if you will, not attack the sclera more often than it does? We see the migratory rheumatism going from joint to joint and having attacked them all still the eye escapes. It is one of those unexplainable occurrences in medicine which we often see and are unable to give any satisfactory explanation.

The causation of the disease then is an infiltration of the fibrous tissue of the sclera, the rheumatic poison setting up an inflammation there very analogous to that in the fibrous tissue of a joint, with the impairment of the function of the part.

The *prognosis* should be given with considerable reservation, though with certainty as to ultimate recovery. The recovery is slow always. As to the repairment of vision, you can always state that vision will be as good afterward as before. In hospital practice where the cases can be watched more closely and longer than in private practice, we have the best results because the patients become less impatient, and the treatment can be instituted with greater precision. It is in the hospital that the methods of treatment become known, and where new remedies can be tried, prognoses modified, and diagnoses learned.

Many remedies are tried and various methods employed. I will endeavor to give summarily and succinctly the experience at the hospital. We have tried the galvanocautery with varying results. Sometimes we have thought good followed, at other times the results have been very indifferent. Astringents externally give very little benefit. Massage has been found to do the most good, accompanied by the internal administration of anti-rheumatic treatment, such as the salicylates, alkaline treatment, salicylate of quinine, potass. iodide, and similar rheumatic treatment. Our results from massage, the salve being the yellow oxide of mercury, grains three, to the drachm, of lanolin or vaseline, have been very gratifying indeed.

The duration of the disease is very variable, so that no definite duration can be stated. My method of treatment is, generally, to use massage at least twice daily, morning and evening, and if this cause too much inflammation and irritation, then lessen the massage to once daily, preferably in the evening before retiring; this external treatment must be accompanied by bold anti-rheumatic treatment, pushing it as far as possible. Episcleritis when so treated will yield as readily as can be expected from a disease so obstinate as the one under consideration.

129 South Broadway.

THE CURE OF THE ALCOHOL DISEASE, FROM A PHYSIOLOGICAL POINT OF VIEW.

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The day of medical theories which do not have the basis of established facts to justify them belongs to the past. It has taken ages of observation and investigation by the greatest intellects of the profession to elevate the science of medicine to the high position it now occupies. We live in an age of light and knowledge; an age in which old isms, theories, and fallacies are fast disappearing before the sweeping progress of this century. The past decade has given us the beginning of a new epoch in the science of life. Medical science is now called upon to defend our bodies from the parasites which prey upon us from without, and physiological and chemical researches have taught us the therapeutic application of drugs in the cure of dipsomania and kindred diseases.

The power of self-regeneration is one of the great distinctive properties belonging to all organized living bodies; but the moment we commence to live we begin to die. Molecular change may be increased or retarded by various foods and drugs taken into the system at stated periods. We apply the term hunger to that peculiar want felt by the human system for food, a sensation (when not too long prolonged) by no means disagreeable, and one which is often excited by the sight or smell of a savory dish. It is true the taking of food is influenced in some degree by exercise and habit, as well as by the sense of hunger, and if our systems are not supplied at regular intervals by this nourishment, the sensation of hunger becomes so great that we suffer pain and distress. All the elements necessary to nutrition (except oxygen and light) can be taken into the system by the mouth, and if it were not that there comes a time in the history of every organized body when the tissues fail to appropriate sufficient new material to repair the waste, we would continue to live forever.

Death is, therefore, a physiological necessity. Therefore, there is no such thing as true Euthanasia. But, it is the duty of the physician to secure for man such good health as shall bear him in activity and happiness onward in his course to the goal. Good health and happiness can be secured by living in obedience to the laws of health. When the medical profession succeed in teaching to the world how to live in a proximate, physiological normal condition, then they will have reached the consummation of their calling.

Fifty years ago there was not a Medical College in Europe or America that had a special chair of Neurology, whereas, to-day there is not a school that has not at least one such chair, and some schools have two and even three professors who are giving their undivided time and attention to discoveries and advancements in this important branch of medical science. It is therefore gratifying to the American student of scientific medicine to note the amazing progress that has recently been made in the discovery and cure of nervous diseases, especially by American Neurologists. It was our beloved Rush, who, a century ago, stood as the great pioneer (in advance of all the world) to describe and demonstrate the future of this branch of medical science. It was through men like Rush, Pinell, Brown-Sequard, and others, we learned that insanity is a disease, and not the devil in man, as was generally supposed prior to their time. So that to-day, while medicine is advancing all along the line, in no other department has there been such advancement as in the discovery and treatment of nervous diseases. Advancement has been so rapid in this special department of medicine, that some writers claim that all diseased manifestations are but the result of nervous shock.

Vesalius took his own life in his hands when he was bold enough to sharpen his scalpel for the first dissection on the human body. Galen followed and taught us that the arteries contained blood, and not air, and Harvey showed us how that blood circulated. Jenner, Pasteur, and Koch have been bold enough to transfuse the very elements of chemistry into our blood in order to kill the myriads of germs that infest our organisms and produce disease and death.

By the aid of physiology and chemistry we have used the elements around us to cure disease and prolong life. The great labors of the past are but now beginning to bear their fruits. Alcoholic neuritis is no longer considered a habit, but a disease; as much so, indeed, as insanity.

The old fogy element of the profession may cry out against this new departure in the treatment of a disease; but it cannot stem the tide of scientific progress when the world can see the results and witness the benefits to mankind. The Secum-Lumen, the great light, will open the eyes (of the old fogies) as the noon-day sun opened the eyes of the scoffers of Jenner. If one poor soul can be saved, who dare cry against the cure of a disease that cuts down youth in his vigor, manhood in his glory and strength, and age in his weakness; a disease that has produced more misery, sickness, and death than all other diseases combined?

It is an insult to medical science to say that all the brave and good men who have killed themselves with alcohol and opium did so just from habit. Tell me that all the men of genius whose lives have been wrecked and ruined by these drugs were led to their use by mere accident? Impossible. These men fought like heroes against their disease; and for these diseases they were not responsible.

The day has come in the fullness of time when we can say that this disease that has destroyed so many shall destroy no more. Thousands of human beings are being rescued from the destroying influence of these diseases, and thousands and tens of thousands are yet to be saved from an untimely death. Every new advancement in the science of medicine is met with a storm of opposition. Dipsomania must be recognized as a disease, and not as a habit. Until recently the medical profession have neglected to examine this subject carefully from a physical point of view. They must examine this subject as they examine any other ailment if they wish to reach a satisfactory conclusion.

It is not the intention of this article to begin a controversy with those who honestly believe that inebriety is the result of habit alone. Inebriety is no more due to habit, vice, and sin, than is insanity. If inebriety is a disease, then its cure rests with the physician; if it is wholly a sin, and the man is entirely responsible for his appetite, then his treatment and salvation must come from those who claim it is a habit. A Christian will be a better, a brighter, and a happier Christian if we can remove this appetite for stimulants and give him a healthy stomach. An ounce of cure is worth a pound of prevention, if applied at the proper time. Thousands have been crying for help from this dreadful disease, while theorists have been talking, and preaching, and splitting hairs as to whether it is a moral or physical evil. The word habit, like the word malaria,

is a convenient word with which to explain something we know nothing about. Conversion, change of heart, and the grace of God are great moral helps, but they cannot cure a diseased nervous system, nor a depraved stomach. The moral side of intemperance has been proclaimed for ages, and yet statistics show that inebriety is still on the increase.

On this subject the medical profession have remained silent entirely too long, and have allowed moralists to advance their own views in the matter without any scientific examination of its cause, its nature, its character, or its curability. We must admit that the moral agitation of the subject has done much good, but still there is something wanting. The removal of alcohol does not remove the craving, but rather increases the appetite for it. If we cannot cure the inebriate by the application of drugs scientifically applied, then we shall never be able to cure him by forced abstinence. Public opinion may deny this, and opposition may come from every superstitious person in the land, but that will not frighten the conscientious and progressive physician who has science, experience, and results to support him. He must go patiently on, and look beyond the present opposition of the incredulous and sceptical public, until he has worked out the physiological and pathological condition of the inebriate and restored him to health.

Man is a complex animal, full of variations, and easily influenced by any change in his nerve-centres. His call for stimulants arises from a loss of nutrition to some part of the central system, just as the call for food arises from the same cause. Therefore, it is impossible to cure this morbid craving, which has its seat in the brain, without first removing the cause by appropriate medication. The inebriate may be anxious to quit the use of the stimulant, but the moment he makes the attempt his diseased stomach and brain give notice that they must have something to nourish them.

It is not within the scope of this short article to analyze and examine the many predisposing causes of this disease, such as: heredity and non-heredity, occupation, etc., or we might present many facts and data, that would help to determine this question outside of any personal feelings or opinions we may entertain. There is no subject that should receive more interest or more attention from the profession than this subject of inebriety; and yet in the past we have allowed the laity to do all the thinking, writing and legislating on the subject. It is time we call a halt. The physician is certainly better qualified to investigate the subject, and to pass his judgment on it than those who have never examined it from a scientific point of view. While I have myself devoted years to the special study and treatment of this disease, examined the different systems of treatment (the old and the new), seen successes and failures (under restraint and non-restraint) treated with drugs and without drugs, yet I feel that we have but commenced the study of a disease whose future is full of important information, and of which there is yet much to be learned. We should never allow ourselves to be carried away by the enthusiasm which naturally follows success, nor be discouraged by failures.

The same general principles apply in the treatment of this disease that apply in all chronic nevous diseases. Physical laws and forces are all the same in all individuals. The system broken down by long years of dissipation cannot be relieved by any one drug or combination of drugs alone, but by building up the whole body by special diet, baths, exercise, electricity and good hygienic surroundings. In my hands a combination of drugs has proved most beneficial. Each and every case must have special treatment according to the symptoms manifest. No doubt chloride of gold possesses wonderful alterative properties, and when properly and systematically given in combination with strychnia, atropia, coca, quinine, sulphonal and codeia, they have a tendency to change the habits of the system, and remove the diseased condition of the nerve-centres and allow nature to return to a normal condition. These powerful drugs, when given for a long time, so profoundly influence and build up the nervous system, that the inebriate feels strong and well, and gradually acquires as much repugnance for stimulants as he before had an appetite for them. The treatment breaks or removes the cause of the disease and the inebriate starts in a new career of life.

Of course he may relapse as he may from any other nervous disease. Anything that tends to exhaust the brain, or lower the vital forces, predisposes to a return of the disease.

The individual should live a life free from excitement, annoyance and worry, eat wholesome and substantial food and be constantly under the observation of a physician. Physicians who are familiar with the modern treatment of inebriety do not condemn it; they rightfully refuse to endorse nostrums of which they know nothing. The general practitioner has not the time to devote to the treatment of

these cases. He might as well attempt to treat all his cases of insanity.

Specialists have explored the grounds, investigated the disease and formulated the treatment, and are therefore more competent to handle such cases successfully. Nor is it advisable for the patient to treat himself. Most drugs that are of any value in this disease would prove dangerous in his hands. Besides, the most of the treatment must be given hypodermically, which an unskilled person cannot do.

My reason for dwelling upon the neurological and physiological aspect of this disease is to call the attention of those outside of the medical profession to the great advancements that have been made in this special department of the healing art. The world is too apt to look with disfavor upon any new discovery that is invisible and incomprehensive to the common mind.

They grow wild over the graphophone, the telephone or electric car, but fail to realize the subtle and invisible agent that science is using to cure man. In conclusion we may then state with perfect confidence, that inebriety is a disease and not a habit; and in order to intelligently treat it we must study the nature and character of the disease as it manifests itself in different individuals. We must approach the subject from the physical and not the moral side of case. We must discard any preconceived notions and theories not based upon facts.

The public should not expect them to prove infallible. The best that can be expected of any remedy, is that it will cure the majority of all the patients to whom it is properly administered, and this is just what this modern treatment has done in dispsomania. The deliverance of humanity from this terrible disease will mark a new epoch in the science of medicine.

Facts are the basis of an infinite wisdom that never err. The discovery of every new truth in medical science marks its advancement over past ages. New discoveries spring up with such rapidity, that in the busy routine of professional life we have scarcely time to sift, weigh and analyze their value for good or evil. By the selfishness of our natures we are more prone to condemn and criticise, than to praise.

President Garfield once remarked, that he was always struck with awe when standing near the ocean, and seeing the waves lashed into fury and tossed into spray. Its grandeur would move the soul of the dullest man. But it was not from these billows, but the calm level of the sea from which all heights and depths, lengths and widths are measured And so in the conflicts of science, like the waves of the ocean, one follows the other and after a moment's existence, each one in turn is overwhelmed by the one that follows and both are merged into the past. But human thought differs from the waves of the ocean in this: That we advance and grow in wisdom and knowledge, and that an occasional wave is thrown so far out that it will never recede, so that the eyes of the whole world can behold the progress that has been made to save and prolong human life.

The medical profession is advancing. This century has had its Virchow, Pasteur, Lister, Esmarch, Tait, Billroth, Paget, Koch, Sims, Morton, McDowell, Gross, Pancoast and Agnew.

TWO SUCCESSFUL CASES OF THE CONSERVATIVE CÆSAREAN SECTION.*

By CHAS. JEWETT, M. D.,
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Case 1. English woman, 32 years of age, 4 feet, 6 inches in height. Health fair with the exception of a chronic nephritis. Pelvis kyphotic. Inlet slightly contracted. Outlet 2¾ inches in the pubo-coccygeal, 2¼ inches in the bisischial diameter. Admitted to the Long Island College Hospital after being several hours in labor. Os externum dilated to the size of a half dollar, and membranes ruptured. Operation Dec. 2, 1891. Pulse 90. A large thin-walled rubber tube used as a provisional uterine ligature. Placental seat under the uterine incision. Hand passes over the left edge of the placenta, and through the membranes. Head extracted with difficulty, and only after relaxing the grasp of the constrictor. Cord clamped at two points with catch forceps and cut between them. Child alive and respiration promptly established. No eventration of the uterus. Placenta and membranes separated by hand, and uterine cavity left undisturbed. Uterus closed with 12 deep silk sutures. Symperitoneal suture of catgut. Almost no handling and no special cleansing of the peritoneum. Abdomen closed with ten silk sutures. Blood loss no greater than in ordinary labor. Tonicity of the uterine muscles apparently unimpaired by the cervical ligature. Good recovery with no sign of sepsis. Abdominal sutures removed on the tenth day. Uterine involution somewhat tardy.

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* Abstract of paper read before Medical Society, State of New York, Feb. 2, 1892.

Case 2. Was a German immigrant, 20 years of age. She had for a long time been subject to hysterical paroxysms occasionally ending in convulsions and semicoma. Was in bad condition from inanition. Was the subject of a slight broncho-pneumonia at the time of operation, and also of syphilis in the second stage. A most remarkable feature of this case was her temperature record. The thermometer several times before operation, registered 107° F., and once 110°. At the beginning of the operation her temperature was 108⅘° F. The woman was of slender figure, 4 feet 8½ inches in height, and her pelvis extremely flattened. True conjugate 2½ inches. Pubo-coccygeal and bisischial diameters each 2¼ inches. She fell into labor shortly after the sixth month of gestation. Operation about ten hours after the first pains. Waters had drained away but the cervix would barely admit the examining finger. Section complicated with troublesome protrusion of intestines owing to tympanites. Nearly complete escape of the liquor amnii and placenta prævia cæserana. Large thin-walled rubber tube used as a uterine ligature as in the previous case. Placenta separated as before. Child alive and breathing but not viable. Uterus lifted out of the abdomen. Membranes separated with difficulty. Uterus closed with ten deep sutures in 14 minutes from beginning of operation. Decidua not included in the sutures. Sym-peritoneal sutures of silk. No flushing and little cleansing of the peritoneum. Abdominal incision closed with ten silk sutures. Temperature at close of operation 98⅘° F. Pulse 90—lower than at the beginning. Some abdominal distension on the second day which was promptly and permanently relieved by free evacuations of the bowels with salines. The temperature soon resumed its customary oscillations, but there was no bad symptoms attributable to the abdominal section, and the patient made a satisfactory recovery.

The writer mentions as the most important points in the technique of Cæsarean section, asepsis, the secure closure of the uterine wound by the typical Sanger suture, with silk, the avoidance of all scrubbing and the use of antiseptics of any kind in the aseptic uterine cavity, and the avoidance of irrigation or much sponging of the peritoneum. The resort to saline cathartics soon after the first expulsion of flatus, the writer considers a valuable measure. The best time for operating in his opinion is an appointed time immediately before labor. The simplicity of the technique, and the comparatively favorable condition of the patient in timely operations he thinks entitles us to expect in Cæsarean delivery quite equal to or better than the best records of laparotomy in disease.

A CASE OF LATENT NEPHRITIS WITH SUPPRESSION OF THE URINE IN CHILDREN.

By G. D. THOMAS, M. D.,
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In The Medical and Surgical Reporter for Nov. 21, 1891, appears an article from the pen of Dr. Alexis M. Léon on "Latent Nephritis with Suppression of Urine in Children." The infrequency of the occurrence of this disease is noted in this article, and on account of its rarity I take this opportunity of adding another to the rported cases:

Eddie E——, aged eight years (taken sick on his eighth birthday). Family history—Father and mother both alive and healthy. Two brothers, two sisters, all healthy. Previous history—Had had no serious illness up to the present attack, had passed through measles and chickenpox (?) without complications; two years before had scarlet fever, which was considered a light attack, speedy recovery without known sequelæ. For a year he had expectorated a great deal. On being corrected for the habit, said "he could not help it, as it came in his mouth." Being a neighbor's child I had noticed his waxy appearance for a few months before his attack. The parents can remember now that he was less active lately than in former years, and that he could not stand as much cold as usual. Was constantly in cool weather seeking the fire. Had never observed any œdema or dropsy before attack. Has had no cold, nor has he been particularly exposed more than other school children.

Present history—Saw the patient for the first time Tuesday, Dec. 8, at 9 a.m. Had vomited some through the night and complained of head-ache. Temp. 99°. Pulse 56 and compressible. Slight œdema of eyelids and face; none at ankles or elsewhere. Tongue brownish-white coat. Prescribed a calomel purge and made request for morning urine to complete diagnosis.

Patient seemingly much better after evacuations, playing and singing with the other children during the evening.

Wednesday, 8 a.m. Patient not so well this morning. Has vomited several times through the night. Head-ache continues. Still walking around but is apathetic, and

inclines to be on lounge. Temp. 99°, pulse 58. Bowels have moved five times. Œdema of face increased; some anasarca on dorsum of feet. The urine voided in the morning was obtained and amounted to about one ounce. On examination by heat it coagulated in a mass. Microscopically, a few casts (hyaline). Amount was so small that specific gravity was not taken. Ordered the patient to bed and began active treatment, the object of which was to sustain him and have the skin and bowels perform the function of the kidneys. Prescribed infusion of digitalis with acetate of potassium, and sulphate of magnesia. Diaphoresis promptly obtained. Œdema of face rapidly increased, nearly closing eyes by 6 p.m. Some convulsive twitchings. Temp., now (6 p.m.) 103°, pulse 74. Suppression of urine complete. Pilocarpine and salicylate of sodium added to the treatment. Bowels acting every two or three hours. Drinks freely of water, milk, and lemonade.

Thursday, 8 a.m. Patient passed a good night. Strength still good. Temp. 98.5°, pulse 74. Œdema much less in face. Œdema in other parts increased, especially in scrotum.

Thursday, 6 p.m. Symptoms little changed. One of consulting physicians catheterized patient, obtaining seven or eight drops of urine. Suppression still complete. Hot, wet pack ordered to aid in diaphoresis. Comes out with good pulse, and strength maintained.

Friday, 8 a.m. No change. Anuria complete. No convulsions. Two more hot, wet packs, the patient resisting, they were discontinued; gave good results however.

Saturday, Dec. 12. Symptoms nearly the same. Temperature slightly sub-normal, 97.9°. Small doses of pilocarpine ordered.

Sunday, 8 a.m. Suppression still complete. Bowels and skin still active. Pulse 58, temp. 98.2°. Losing strength. Has slept several hours through the night. Continues to take nourishment. More œdema on eyelids.

Sunday, 6 p.m. Since 4 p.m. patient has been rapidly failing. Respiration 44, pulse variable, 90 to 110, weak and thready. Temperature 99°. Gradually sinks, the end coming at 11 p.m., by asthenia.

Remarks: The points of interest in this case are: (*a*) the long and continued suppression; (*b*) the absence of convulsions; (*c*) the idopathic (?) nature of attack.

During the time of treatment from Tuesday morning until the following Sunday night, suppression was so nearly complete that the amount was counted by drops, and the sum total would not have exceeded a drachm and a half. The absence of convulsions is to be considered when so long a time elapsed with anuria complete. During the first twenty-four hours there were some convulsive twitchings of muscles of the face with grating of teeth. This was also the case during the last twenty-four hours of his life. Death was dreaded and expected from the start, and the family forewarned as early as our Wednesday morning visit. The latent nature of the disease is worthy of note. In studying the previous history of the case, the attack of scarlet fever seems to be the only exciting cause obtainable. And from the family as well as the then family physician, comes the statement that the attack seemed very light, and a good recovery promptly obtained. The attack apparently came unprovoked, but was none the less exaggerated in its manifestations.

SOCIETY REPORTS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PÆDIATRICS.

Stated Meeting, Feb. 11, 1892.

The greater part of the evening was devoted to a discussion on the therapeutics of Diphtheria. It was opened by Dr. Joseph E. Winters, who confined his remarks to a consideration of "The Best Disinfectant and Best Apparatus for Use in the Mouth and Nose," and exhibited the apparatus which he employed.

He assumed that all were agreed that the disease is primarily local, and due to the Klebs-Loeffler bacillus. At no time in the course of the disease do these bacilli invade the blood; they are confined to the superficial parts in the immediate neighborhood of the membranous exudation. The tonsils, naso-pharynx and nasal passages are in most cases the initial points, and when it is remembered that these bacilli, when brought in contact with a healthy mucous membrane, will not provoke diphtheria, the importance of avoiding the application of all irritating substances to the nose and throat becomes at once apparent. Such treatment by irritating applications is positively dangerous, as the adjacent tissues are likely to become fresh points of infection. If a very small quantity of boric acid or of carbolic acid be added to a culture medium, the growth of the Loeffler bacillus will be materially hindered. This shows that it is needless to use irritating

substances with the idea that they are necessary in order to successfully cope with the disease. The local treatment should be such as will admit of the patient maintaining the recumbent posture at all times, and the speaker favored the use, for a child, of a small crib, with one side capable of being let down to allow the attendant proper access to the patient. The pillow and bedding should be protected by rubber sheeting, so arranged as to carry off the irrigating fluid into a proper receptacle. He advised the use of a Davidson syringe with a nasal tip, and a saturated solution of boric acid, or a ten per cent. solution of peroxide of hydrogen, from half to one pint of the fluid being required at a time. If the irrigation be performed through the mouth, much of the debris is liable to be swallowed, while if it be done through the nose, there is not only less resistance, but the fluid flows out either through the other nostril or through the mouth. Occasionally, in severe cases, it becomes necessary to irrigate through the mouth, and under these circumstances he favored attaching a rubber tube or soft catheter to the tip of the syringe, and passing it along the side of the mouth to the last molar tooth. In cases of ordinary severity, these irrigations, whether through the nose or through the mouth, should be repeated about every two hours; where there is much obstruction, or fetor, it should be done even more frequently. The first syringing should always be performed by the physician himself, no matter how experienced the nurse may be. After the first time, there will usually be but very little resistance on the part of the patient, and almost no exhaustion, in which respect this method compares most favorably with all the other methods of local treatment commonly employed.

External applications form an essential part of the local treatment of diphtheria, and among these steam was one of the most generally useful. The Arnold Steam Sterilizer with the croup kettle attachment was a good croup kettle, which was more than could be said for most of the others in the market. All croup kettles should be furnished with two or three feet of large rubber hose, which may be slipped over the spout of the kettle. In order to be efficient, the steam must be brought quite near to the little patients while they are asleep, and in order to do this, and follow the frequent changes of position of the child in the crib, it is absolutely necessary that a flexible tube be attached to the kettle. He usually placed in the water in the steam kettle two drachms of oil of eucalyptus and two ounces of turpentine. He preferred, as a source of heat, a gas stove to a spirit lamp.

There was another external application which he had found very useful, and the use of which he had advocated before this section some six or seven years ago. It was the inhalation of the fumes from burning sulphur, or sulphurous acid gas. He had found nothing which had given so much relief to the inflammatory swelling and to the dryness of the throat, and the pain on swallowing; it was far more efficient for this purpose than either steam or cocaine. It was quite remarkable that when the atmosphere of the sick room became so laden with the sulphurous acid as to make it absolutely unbearable to the attendants, the patient experienced the most relief from it. He had noted this in his own case, when sick with diphtheria, yet since his recovery he finds that his throat is as sensitive to this gas as are the throats of the attendants. He had observed this in many instances, and Dr. Van Wagnan, of Newark, had noted the same effect upon himself. His custom was to burn a sulphur candle in an adjoining room, or even in the sick chamber itself. The sulphurous acid gas promotes secretion, and seems to favor the exfoliation of the diphtheritic membrane.

Dr. J. Lewis Smith remarked that Dr. Winters used the peroxide of hydrogen in greater dilution than was the custom with a great many physicians, and did not seem to make any distinction between the solution for the nares and that for the mouth. For the fauces, Marchand's peroxide of hydrogen solution, one part to two of water, he thought about the strength, and for the nares, one part to five or six of water.

Dr. L. Emmett Holt said that he had tried a ten per cent. solution, the strength recommended by Dr. Winters, on his own nose, and had been astonished at the amount of irritation which even this dilute solution produced.

Dr. H. D. Chapin followed with a paper on "Quarantine and Disinfection in Limited Apartments; the Precautions for the other Members of the Family." He said that in most cases the end room or parlor should be selected, and all superfluous articles removed. It was a common custom in the tenement houses for the patient to be placed on a sofa, but this should be carefully avoided, a cot being selected instead of either bed or sofa. The attendant should have a wrapper to wear in the sick room only, and the secretions should be collected on rags and then burned.

The Board of Health furnished a disinfectant solution consisting of chloride of zinc, four ounces, and chloride of sodium, two ounces to the gallon of water; this was useful for soaking the linen in before boiling it in the laundry. After the termination of the case, quilts, pillows and comforters should be thoroughly shaken on the roof, and exposed for many hours to fresh air and sunlight; the floor, walls and ceiling should be washed with a 1:20 solution of carbolic acid, or a 1:1000 solution of corrosive sublimate, and the same fluids might be used to flush out the sinks and water-closets. If the walls were papered, they should be rubbed with stale bread-crumb. He still believed that sulphur fumigation was useful; possibly the thorough airing which must necessarily follow may not be an unimportant factor. If the municipal authorities could be induced to establish stations or places of refuge for the well children in families stricken with the disease, great good would certainly result.

Dr. Allen said that in regard to the precautions to be taken by the physician himself to prevent the spread of the disease, he wished to direct attention to a very useful contrivance which he had seen in use in Europe, but which did not seem to be known here. It was simply the interposition of a glass plate between the physician's face and the patient while local applications or examinations were being made. He had more than once seen this screen intercept particles of diphtheritic membrane and secretions, which otherwise would have lodged on the physician's face or beard, and might have been the means of carrying the disease to his own family.

Dr. A. Seibert said that he covered himself with two aprons, and thoroughly washed his hands and arms, and if necessary his face with Labarraque's solution, before leaving the sick room. He believed that many cases of diphtheria were contracted by children crawling around on an infected carpet, and carrying the contagion on their fingers to their mouths.

Dr. Fischer referred to an investigation now in progress, which seemed to show that the sewer pipes had much to do with spreading diphtheria to different parts of the house.

Dr. L. Emmett Holt took up the subject of feeding, and demonstrated a method of forced feeding. He thought the most common mistake was to overdo the matter of feeding and stimulation, so that when a crisis did arise, but little could be done. Ice cream and wine jellies were often swallowed, but the former very often disagreed with the stomach, and the latter were often open to the same objection, and moreover contained but little nutriment. Milk should be selected, and might be given either hot or cold, according to individual preference, properly diluted to suit the age of the child. Mutton broth, beef juice, wine whey, oatmeal and barley gruels, and junket, cold and flavored with a little wine, were all valuable additions to the dietary. Kumyss, if taken well, is very valuable, but unfortunately few children cared to drink it in diphtheria.

Stimulants should usually not be mixed with the food, as it often causes a disgust for the food, nor is it desirable to give it till the heart shows some sign of weakness. A child can rarely digest a meal in less than two hours, hence nothing but predigested foods should be given oftener than this. The quantity of food should be somewhat less than the same child would ordinarily digest well in health. When stimulants are indicated, they may be pushed until the desired effect is reached, the only limit being the tolerance of the stomach. They are best given in small and frequently repeated doses, hence, it is better to prescribe the quantity to be given in the twenty-four hours, and allow the nurse to use her judgment as to how she can best give this quantity in the required time.

In many cases where there is much sepsis, or great prostration, all nourishment and stimulants will be refused, and neither coaxing nor commands will avail. The rectum in young children is usually so irritable that it cannot be depended upon for more than two or three nutrient enemata at the most, hence one is forced to feed by the mouth or nose, the former was usually preferable unless there was a great deal of resistance. Completely peptonized milk or kumyss should be given in this way, along with the prescribed quantity of stimulants, every four hours, and this will be sufficient to maintain proper nutrition. The apparatus consists of a glass funnel, a piece of rubber tubing, and a soft rubber catheter. The red catheters made by Whitall, Tatum & Co., he preferred to Tiemann's soft catheters, simply because they were a little stiffer.

Dr. Abraham Jacobi spoke of "the Constitutional Treatment." He renewed his advocacy of corrosive sublimate, and stated that babies would take from one-fourth to one-half of a grain of this drug in twenty-four hours, if given in small doses, *largely diluted*, without having stomatitis or enteritis. If diarrhœa should occur, a few doses of paregoric will speedily control it. The failures

with this treatment usually occurred from not using the bichloride sufficiently diluted; one part in eight or ten thousand of water is the proper dilution. He also spoke of the value of calomel inhalations in pseudo-membranous croup when repeated every three hours, keeping the patient in a closed tent for about five minutes, and allowing about ten minutes for the evaporation of ten grains of calomel.

The pulse should be carefully watched in diphtheria, remembering that a rise of ten beats may mean that heart failure is imminent. It is important to remember that the ordinary doses laid down in the books will not answer in the face of sepsis from diphtheria. For instance, quite recently a baby was given one minim of Squibb's fluid extract of digitalis every hour until thirty-three doses had been given, before the drug began to show its effect on the heart; then the digitalis was given only once every three or four hours. When heart failure threatens, stomach absorption is often very imperfect, and subcutaneous administration of stimulants must be resorted to. Then, one part of camphor dissolved in four or five parts of sweet almond oil serves a good purpose as a cardiac stimulant which can be readily and painlessly injected under the skin. The salicylate or soda-benzoate of caffein dissolves in two parts of water, and is therefore eligible for subcutaneous administration.

Dr. A. Seibert then exhibited the syringe which he employs for making what he terms "sub-membranous injections" in diphtheria, a method which he had been using with apparent success for the last eighteen months. He injected a much larger preparation of chlorine water than the officinal one, and of course, made use of the usual method of constitutional treatment in conjunction with this new method of local treatment.

THE DROP BY DROP METHOD OF ADMINISTERING CHLOROFORM.

Two communications appear by Brandt (*Centralblatt f. Chirurgie*, No. 47, 1891) in which especial stress is laid upon this method of administering chloroform. Zuckerhandl claims that the method has been extensively employed in Dillel's clinic at the Vienna General Hospital with excellent results. Brandt states that Lauenstein, in the Sailors' Hospital at Hamburg, has used the same method for six years without a single accident occurring in consequence of the use of this anæsthetic agent. Only in rare cases is morphia used with chloroform anæsthesia.

SELECTED FORMULÆ.

FOR SORE THROAT.

℞ Cocainæ hydrochlorat.....gr. viij.
Acid. carbolici.....3 j.
Glycerini.....f 3 iv.
Aquæ rosæ.....ad f 3 xij.
M. Sig. To be diluted with an equal quantity of water, and used alternately as a spray and gargle.

CATARRH, NASAL.

℞ Sodii chloridi.....3 i.
Glycerinæ.....3 iv.
Aq. rosæ.....oz. i.
Aq. dest.....q. s. O. i
Acidi carbolici.....gtts. v.
M. Sig. Snuff up nose several times daily.

or,

℞ Tannin glycerol.....3 i
Glycerinæ.....3 iii.
Acidi carbolici.....gtts. iii.
Aquæ rosæ.....3 ii.
Aquæ dest.....3 ii.
M Sig. Use with atomizer.

or,

℞ Potass. bichromat.....gr. i to x.
Aquæ rosæ.....3 iv.
M. Sig. Local spray.

CASCARA SAGRADA AS A PURGATIVE IN CHILDREN.

This drug has been found to be the most reliable purgative in infants and children. It may be prescribed as follows (*Lo Sperimentale*, No. 23, 1891):

℞ Tr. cascara sagrada, } ää grammes 10.
Simple syrup, }
From one-half to a coffee-spoonful, according to the age of the children.

WHOOPING COUGH.

Dr. Galvagno (*Lo Sperimentale*, No. 23, 1891) proposes the following formulæ:

℞ Distilled water.....grammes 100.
Resorcin, }
Antipyrin, } ää gramme 1.
Muriatic acid.....gtts. 10.
Simple syrup.....grammes 30.

℞ Gum arabic solution.....grammes 100.
Resorcin, }
Antipyrin, } ää gramme 1.
Syrup of pine tar.....grammes 30.
Three to five tablespoonfuls a day.

PALATABLE QUININE SOLUTION.
(LUTZ.)

Quinine sulphate.....gramme 0.05.
Sulphuric acid. dilute..... " 0.05.
Sol. saccharin, saturated..... " 1.00.
Water.....grammes 9.00.
Spirit of peppermint.....gtt. 5.

CHRONIC DIARRHŒA WITH INTESTINAL FERMENTATION.

Dr. Eichler (*La Cronaca Medica*, September, 1891) uses the following:

℞ Salol.....grammes 3.
Ol. ricini..... " 15.
Symp. rhei..... " 30.
Aq. cinnamon..... " 120.
Gum arabic, q. s.
A large spoonful eve hour l t laxative acts.

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LEADING ARTICLE.

RECENT INVESTIGATIONS REGARDING THE ÆTIOLOGY AND TOXICOLOGY OF ASIATIC CHOLERA.

With the discovery of the comma bacillus in Asiatic cholera by Koch in 1884, the investigations relative to the ætiology of this disease assumed a new phase. All methodically schooled investigators were forced to the conclusion that the comma bacillus only was found in cases of Asiatic cholera, and were, therefore, necessarily led to the acknowledgment that this bacillus was the exciting cause of the disease. Only a few investigators claimed that their appearance was due to a preëxisting infection of the disease, and that they were secondary to, and not the cause of the malady.

This endeavor, by means of an illogical train of thoughts, to modify the brilliant discovery of Koch, was shattered by the logic of potent facts. Klein and Lewis who went to India with the idea of overthrowing this theory, found that even there the conservative English physicians had to a large measure embraced the parasite theory as one long in accordance with their views resulting from actual experience, and so the researches of these two did little but strengthen Koch's theory.

The most recent investigations in this domain have been those of Dr. D. D. Cunningham, of India, who, armed with scientific methods and apparently good arguments, has endeavored to destroy the groundwork of our present conception of the ætiology of Asiatic cholera. Even Cunningham cannot and does not deny that he has found Koch's comma bacillus only in cases of Asiatic cholera, and considers them, therefore, of great diagnostic value. He, however, questions their ætiological importance, and returns to the already rather hackneyed theory that these bacilli are developed under the influence of some unknown choleraic cause. His main arguments against the ætiological importance of the comma bacillus are as follows:

1. That in the positive cases of cholera, in

which he found the comma bacillus, he also found nine other germs, not exactly similar to Koch's bacillus, which he designates as various "species" of the comma bacillus.

2. That he occasionally in one and the same case found as many as three of these so-called species.

3. That in a few typical cases of Asiatic cholera he found no comma bacilli.

These different "species" he has succeeded in obtaining cultures of.

In the determination of Koch's species, Dr. Cunningham has only been guided by Dr. Koch's descriptions of the bacillus. All those bacilli which did not appear precisely as Koch had described them were dubbed as different species. Koch, however, never asserted that the forms of the comma bacillus described by him were the only ones found in Asiatic cholera, but described those forms occurring most frequently as the typical forms, leaving the possibility for a slight variance in shape of form always open.

To base so important a theory on a slight variance in the shape or form of a bacillus, is, to say the least, a procedure based on grounds that cannot be regarded as strictly scientific. Such slight variations are common in a large number of microörganisms—we need only remind our readers of the varied forms of the micrococcus prodigiosus. This Cunningham seems to have entirely overlooked in his work, classing all such bacilli as varied in any detail from Koch's description of the typical comma bacillus as another bacillus or "species."

If, therefore, in Asiatic cholera a bacillus is found which does not exactly coincide with Koch's description of the comma bacillus, it must be proven beyond all doubt that the bacillus is really another "species" or only a modification of the comma bacillus. Denecke, Finkler-Prior, and Gamaleïa have all found modifications of the comma bacillus, and recognized them as such. Buchner, Gruber, Zaeslein, and Ferdinand Hueppe have all discovered during the past few years modifications of the comma bacillus, which have been proven to be "nutritive modifications" of the same bacillus, that is to say, that the modifications depended upon the nutritive element upon which they were cultured. Most interesting in this connection is the recent work of Dr. Ferdinand Hueppe and his assistants Drs. Wood and Scholl, a report of which appears in the *Deutsche Medicinische Wochenschrift* of a recent date, and to which this article is indebted for many data and quotations.

Hueppe has succeeded in obtaining all the modifications or "species" described by Cunningham, from a single form of the comma bacillus, obtaining microscopically both the round and oval forms, the comma in the most varied shape, and, finally, also the partially screw-shaped form mentioned by Cunningham. Microscopically he has obtained cultures which would not dissolve gelatine, and so on, past the typical colonies described by Koch to those which would entirely and rapidly dissolve the gelatine medium.

Hueppe, therefore, affirms that the "species" described by Cunningham are nothing more nor less than nutritive modifications of Koch's comma bacillus, and that the evidence brought forward by him is insufficient even for the assumption of any other bacillus being the ætiological factor of the disease.

While we have thus demonstrated the possible fallacy of Cunningham's assertions, based as they undoubtedly are upon firm conviction, it will be well for us to add a few salient points in confirmation and proof of Koch's claims, basing our assertions on the results of the most recent bacteriological investigations in this domain in Europe.

Never has the comma bacillus of Koch been found in the intestines of healthy individuals—or still more exactly, never has it been found in the intestines of other than those suffering from cholera—although Klein has vaguely endeavored to show that they may exist in the healthy organism. Whether or not during the progress of an epidemic, a subject physically indisposed to infection may take into his system the germs of cholera without suffering from the disease is by no means proven. Of the varieties of

comma bacillus that can be grown in cultures, only one—the Finkley-Prior variety—has ever been found in the mouth and intestines of a healthy individual.

In Europe, Koch's comma bacillus has only been found in unquestionable cases of Asiatic cholera. And in this conclusion all investigators agree, which is in unison with our epidemiological experiences regarding the introduction of the disease from India, and decidedly in confirmation of Koch's theories. For all these reasons we may be safe in concluding that from all points of view the only tenable ætiology of Asiatic cholera is that which may be termed the "parasitic," and that Koch's views of the ætiological importance of the comma bacillus is proven.

Koch's statements regarding the purely contagious character of cholera, are subject to discussion. On account of the ease of the inoculation of animals from pure cultures of the bacillus, many investigators were prone to accept the possibility of a similar direct inoculation in man, and not to lay sufficient stress upon the possibility for disposition or immunity, and the importance of miasmatic conditions as affecting the parasite when not in the human organism. In cholera this may have been initially excusable in so far as the hardiness exhibited by the cholera bacillus against both dryness and decomposition was well known. Nevertheless, the fact of the ease with which the bacillus could be cultivated, opposed to the one-sided contagion theory, should have aroused the theory of infection.

We know of no unnecessary proofs in nature, and the saprophytism of the comma bacillus as such, and ease with which the parasitic comma bacillus can accustom itself to a saprophytic life after living in the animal organism although the nutritive element upon which it feeds may be most poor, is alone sufficient to award the saprophytism of the comma bacillus in connection with the miasmatic view of the disease an important rôle in the epidemiological ætiology of cholera.

We cannot, therefore, in a just consideration of this important subject confine ourselves on the one hand to a "purely contagious" view of the disease, or on the other hand to a "purely miasmatic" view.

Hueppe's experiments have conclusively shown that in the saprophytic life of the comma bacillus and the parasitic life, there are the following differences: During the anaërobic life of the parasite in the intestines, in consequence of anaërobic decomposition of the nutritive matter there, the comma bacillus is unusually poisonous, and capable of showing but slight resistance to external influences; while in their aërobic life they show marked variances and a lessening of their virulence, but on the contrary gain greatly in hardiness.

From the results of the above observations Hueppe sums up the subject succinctly in the following clause: "The comma bacillus is the cause of Asiatic Cholera; these bacteria give rise in the intestines to a poisoning of the organism, which action is not dependent upon their anaërobic life there. In consequence of this anaërobic life in the intestines these parasites become highly poisonous, but, owing to the poor development of membrane, are very prone to influences from external sources. In this virulent but feeble condition they leave the body, so that they (by reason of this weakness and not from lack of virulence) are not suitable for direct transmission from the diseased person to the healthy organism, and, therefore, direct contagion from cholera is exceptional. In their aërobic growth outside of the organism they become more hardy, that is to say, more suitable for infection, and this infection is determined by outside causes, and as a rule is indirect or miasmatic.

The cholera parasite, according to Koch's demonstration, lives only in the intestines, and does not enter either into the blood or tissues. Koch, therefore, sought to explain the infectious actions of these parasites in claiming that the choleraic process was one of poisoning caused by the parasite forming a poison in the intestines which was absorbed into both blood and tissues. In fact several investigators, including Nicati, Rietsch, Koch, Van Ermengen, Klebs, and Hueppe discovered a poisonous action in the bacillus,

and Brieger was able to obtain from a basic culture ptomaines which he isolated as toxines. But yet these experiments, which seemed to promise so much at the outset, proved to be failures, and the entire second part of the ætiology of cholera, and the entire toxicology of the comma bacillus remained an unsolved problem. The fact had been entirely overlooked that the class of poisons thus demonstrated occurred only at a late period of the aërobic life of the parasite, and Hueppe had been able to prove in his laboratory that the development of these toxines destroys the true choleraic poison.

It, therefore, remained necessary to primarily answer several fundamental questions; and this Hueppe, with the aid of his assistants Wood and Scholl, has been able to do. First, since the bacteria in the intestines live without air, or at least with only a minimum quantity of air, therefore, the problem of the anaërobiosis of the parasite must first be solved; and, secondly, the nutritive surroundings must be rendered more natural than those obtained by *bouillon*, or in other words, made as closely as possible to simulate the nutritive soil existing in the intestines.

Hueppe found that by restricting the amount of oxygen that came in contact with cultures he could gradually force the parasites to a strict anaërobic mode of life. Hueppe also found that to ensure the growth of the parasite in such a condition of strict anærobiosis, a but slightly changed and if possible genuine albuminoid body was necessary. He, therefore, conducted his cultures in raw eggs, and was in this way enabled to obtain so much poison in an egg that he was able to kill three guinea pigs under symptoms far more characteristic than any heretofore obtainable through other inoculations. Hueppe therefore, considers himself justified in assuming that he has thus solved the problem of the second question relating to the ætiology of cholera.

Lack of space forbids our going into any detailed description of these vastly interesting experiments of Hueppe and his assistants, and we must restrict ourselves to a brief recital of the principal results obtained, which are as follows:

1. The comma bacillus can be cultured both in regard to the quantity of air (anaërobiosis) and the nutritive soil (albumen) under precisely the same conditions as those found in the intestines of the human organism.

2. In such cases the comma bacillus forms from the albumen a characteristic poison which belongs to the albuminoids. From the albumen is formed a substance which in a purified state gives all the reactions of a peptone. This poisonous peptone paralyzes animals into which it is injected, their coat becomes deranged, the conjunctival reflex is entirely absent, then twitching of the extremities, and finally death occurs, in the majority of cases in a few minutes.

This substance like other peptones is not altered by boiling, in so far as its chemical reactions are concerned, but its poisonous action is destroyed if it subjected to a temperature of 70–75° C. for any length of time or immediately if it be boiled.

The peptone answers all the indications of a specific and typical cholera poison.

Hueppe's experiments show that while the ptomaines found by other observers were important and interesting as far as the saprophytic life of the bacillus is concerned, yet they bore no relation to the parasitic life of the germ.

It is a well-known fact that epithelial cells in the intestines act as guards against the absorption of such diffusible poisons as these abnormal peptones and albuminoids, and that every disintegration of these epithelial cells leaves an opening through which the poison may reach the general organism. If this be true in the case of ordinary diarrhœas and other intestinal complaints, how much more so is it likely to be in the case of so acute a process as cholera, especially if the normal functional condition of these cells is entirely suspended.

It is further known that these epithelial cells are disintegrated by the growth of the cholera bacillus within the intestine, and therefore the probability of an absorption of the poison greatly enhanced.

As the poisonous action of cholera is a most acute process, the therapy which acts as an antidote is at best greatly hampered, and it is for this reason that our treatment has been so unsatisfactory. A therapy that would check the growth of the poison makers (the bacilli) is indicated, and it is on this ground that the use of the salols has been attended with such favorable results. But the question of therapy we must, however, leave for a future article.

BOOK REVIEWS.

PHYSICAL DIAGNOSIS: A GUIDE TO METHODS OF CLINICAL INVESTIGATION. By G. A. Gibson, M. D., D. Sc., T. R. C. P., Ed. Lecturer on the Principles and Practice of Medicine in the Edinburgh Medical School; Examiner on Medicine and Clinical Medicine in the University of Glasgow: and William Russel, M. D, T. R. C. P. Ed. Pathologist to the Royal Infirmary of Edinburgh; Lecturer on Pathology and Morbid Anatomy, in the Edinburgh Medical School. With 101 illustrations. New York: D. Appleton & Co., 1891.

The authors of this new addition to our list of text-books of physical diagnosis are to be congratulated upon having produced one of the best practical guides to the knowledge of that most important subject. The arrangement and general plan of the subject as treated by them is more nearly perfect than that usually adopted in such treatises, and will undoubtedly be highly welcome to American students by reason of its simplicity and thoroughness of detail.

Temperature is first taken up, the various types being well illustrated by charts, and is followed by a chapter devoted to the integumentary system, which is excellent and not too full. Next, the circulatory system is considered, and in this section some original cuts will emphasize the points intended to be impressed upon the student. The same may be said of the next chapter which systematically goes over the latest views regarding the physical exploration of the respiratory organs. The alimentary system and the abdominal viscera are next dealt with, followed by a chapter devoted to the urinary system. The book ends by a chapter upon the physical diagnosis of nervous diseases, and an excellent chapter upon examination of the eye, ear, larynx and naso-pharynx.

The value of the work lies chiefly in the manner in which the subject is presented, in the generalization of symptoms instead of their particular significance in any one condition of disease, and in the faithful attempt of the authors to accurately picture to the student the conditions giving rise to physical signs, instead of attempting to deal with diseases individually, regarding their physical symptoms. The metric system of weights and measures is used throughout. The cuts are original and well executed.

Students and practitioners will find this treatise a valuable one, and principally because it limits itself strictly to the province of physical diagnosis, while at the same time its completeness of detail and description leaves little for adverse criticism. To those already acquainted with the careful work of Dr. Gibson, this book will not come as a surprise

BOTANY. A CONCISE MANUAL FOR STUDENTS OF MEDICINE AND SCIENCE. By Alex. Johnstone, F. G. S., Lecturer on Botany, School of Medicine, Edinburgh. With one hundred and sixty-four illustrations, and a series of floral diagrams. New York: D. Appleton & Co. 1891.

In the preparation of this manual the author has endeavored to compile an illustrated digest and general note-book which the student would find useful in conjunction with systematic instruction.

This little book is, of its kind, one of the most admirable we have ever read. It is written with conciseness and marvellous clearness, the illustrations and the floral diagrams are excellent, and the work of the publisher is equally commendable. It is just such a manual as will thoroughly be appreciated by beginners in botany.

LITERARY NOTES.

—William Dean Howells' new novel, "The World of Chance," began in *Harper's Magazine* for March. Judging from the opening chapters alone, this story promises to outrival in interest anything hitherto written by that distinguished author. This number of the *Magazine* is also especially strong in American subjects.

WHEN BUSINESS AND MORALS ARE ONE.

—It is a very common thing for people to lament that they did not get rid of this or that property before its value depreciated. Of course, what they are really sorry for is that they could not have contrived to saddle their loss on some one else. It is a sign of the imperfection of contemporary benevo-

lence that good people should have such feelings and should regard them as matters of course. They are humorously unchristian. The utmost the average contemporary moralist enjoins is that a man shall not "unload upon his friends." He cannot so much as imagine a scruple about sending out cadescent stocks in open market.

It will not be so when the millennium comes. Property will continue then, as now, to fluctuate in value, but the prospect of a depression will no longer strike the owner as a good reason for selling out. His superior moral sense will then, as now, be profitable to his estate, since property doesn't always depreciate as much as is expected, and often in the end it recovers more than it lost. But the great advantage from a business point of view of the perfected altruism will be emancipation of the altruist from panic and all its consequences, since the man who is more ready to accept his loss than to pass it on, is not to be scared into a foolish sacrifice by the shadow of it beforehand.—From "The Point of View," in the March *Scribner*.

WINE DRINKING AT DINNERS.

—It is an undoubted fact that the serving of many and heavy wines at large dinners is gradually becoming a thing of the past, writes George W. Childs in the January *Ladies' Home Journal* Of course, I do not mean that wines are no longer served, for they are and always will be, so long as civilized men consider them a feature of dinners. But I do mean that of the varieties of wine there are fewer, of the quantities less, and of the qualities lighter, than was the custom ten years ago. Were I preparing for a large dinner for men—which is always from the nature of things more heavily wined than an ordinary "mixed" dinner—I should not think it in the least degree necessary to order anything like the same amount or assortment of wines that would have been imperative a few years ago. And in extenuation of the statement that the qualities of the wines served are becoming lighter, the simple fact that at the average English dinner table port wine has been almost entirely superseded by claret, may be cited. It is also becoming a very ordinary thing at English dinners to meet prominent men who do not drink wines of any kind, and in our country this is becoming more and more a fact. Of course, a dinner must have fluids; the best of solids require some liquids with which to relish them, and a dinner would be but wasted energy and material without them. But I think it is no longer imperative to serve wines, or at least we can serve with them some other beverage which will be of equal pleasure to the constantly increasing set of people who find that wining and dining together is rather too heavy a combination for their comfort.

CORRESPONDENCE.

HYPODERMIC INJECTION OF WATER AS A LOCAL ANÆSTHETIC.

Editor Medical and Surgical Reporter:—In your issue of January 9th, 1892, you quote Dr. C. L. Schleich's experiments on the production of local anæsthesia by the hypodermatic injection of water; his article appeared in the *Deutsche Medizin Zeitung*, No. 66, 1891.

This is not a recent idea, as many journals copying the same have seemed to infer; on the contrary it has been known for fifteen or twenty years. The *Boston Journal of Chemistry* for October 1876, says in this regard, "It is found that subcutaneous injections of water often relieve pain just as effectually as when morphia is used. Nerve pains, neuralgia, sciatica, and the like are more likely to be relieved than the sufferings incident to chronic progressive diseases, as cancer." Then again Dr. Lafitte in a letter to *l' Union Médicale*, of October 5th, 1875, says that he uses an injection of two grammes and then waits a few minutes; if the pain is not relieved then he injects a second similar amount, even in some cases injecting as much as "five or six syringefuls.' He thinks that one should not inject less than two grammes nor more than ten. Dr. Dieulafoy recommends that eight or ten drops of water be injected into the seat of the greatest pain; he adds, that if necessary, this may be repeated ten, twelve or fifteen times at one sitting.

Dr. Griffith writes at length to the *British Medical Journal* and I will quote his words—

"I have attended many patients who had been in the habit of taking morphia, and have treated them with the hot water plan, to the great improvement of their health, and the weaning them of the baneful poison. Even in cases of delirium tremens which had been accustomed to the injections, and in the fury of delirium persisted in calling out for them, I have employed the hot water and so lulled them to rest. But here I would pause to admit that sometimes this plan would fail me, and then I would fall back upon injecting a small dose of morphia first, following it up with the use of the hot

water in two, three or four hours. But it is in the cure of sciatica and deep-seated pain, as well as brow-ague and similar distress that I have found the hot water injections most beneficial; indeed, I cannot recall an instance of failure. For the purpose of carrying out this method of cure I had, in 1868, a hypodermic syringe made after my own plan. The needle is some inches in length; the cylinder is silver (I had broken many glass tubes or cylinders when drawing in the hot water), and contains a drachm and a-half of fluid, if such an amount should be required to be thrown in. The piston has not a screw action, but runs up and down like an ordinary syringe in order that the water may be expelled with the amount of force the operator may think best. In some instances, burying the needle up to the very end, I force in the hot water amongst the muscles, and then withdraw the instrument immediately afterwards, placing the tip of my finger on the perforation point, and, by a rolling movement, dispersing the fluid in its bed. The long nozzle of the syringe acts as an acupunture needle, the fluid as an additional counter-irritant, the patient complains of a smarting, burning sensation, soon followed by relief from the pain; and if the operation be done in the patient's own home, and while he is in bed, sleep will often supervene. In this manner, I have frequently stopped sciatica, the agony of acute lumbago, or that resulting from a sudden strain or fall, besides other minor pains."

These we see are practically all the same, Dr. Griffith, only, deviating slightly in specifying *hot* water. We see then that the method of treatment has an undoubted age of sixteen years, and if we date from 1868, when Dr. Griffith had his special syringe constructed, twenty-four years. In all probability, from the time of Dr. Griffith's letter, he had used the method before that date.

If there is any efficacy in the treatment therefore France deserves more credit than Germany, and England more than either, for apparently priority is possessed by Dr. Griffith.

I have not read "to contradict or confute," to quote Bacon, but to try to give honor to whom honor is due—that is if there is any honor to be distributed—and to show that Drs. Dieulafoy and Lafitte, but particularly Dr. Griffith, deserve credit for their investigations previous to those of Dr. Schleich.

Charles Milton Buchanan, M. D.,
Washington, D. C.

Have the sick room well lighted—sunlight.

PERISCOPE.

THERAPEUTICS.

CHLORINE WATER AND QUININE IN TYPHOID FEVER.

Dr. Burney Yeo recommends as the best antiseptic in typhoid chlorine water with quinine. It is made by putting 30 grains of powdered chlorate of potash into a 12-ounce bottle with 40 minims of strong hydrochloric acid, the bottle is to be corked, the gas allowed to generate, then water is poured in little by little and well shaken with the gas, and finally 24 or 36 grains of quinine and an ounce of syrup of orange peel are to be added; of this mixture an ounce is to be given every two, three, or four hours. In the early stage—first week—one or two full doses of calomel—5 to 10 grains—are recommended, especially if there is constipation.—*Amer. Drug.*

THE TREATMENT OF TACHYCARDIA.

The most distressing affection known as paroxysmal tachycardia, or "rapid heart," has unfortunately not generally proved as amenable to treatment as could be desired; but Dr. Poulet of Plancher-les-Mines has recently found a remedy in a little-known plant indigenous to Alsace, which appears to exert a rapid and beneficial influence over the paroxysms. The plant in question is the Coronilla varia, or *faucille*, which, like some other species of Coronilla, is sometimes used as a household remedy, being considered to have cathartic and diuretic properties. Some recent research by MM. Spillmann and Haushalter on a closely allied species—Coronilla scorpioides—showed that the plant acts as a powerful heart tonic, causing an increase in the arterial tension and in the fulness of the pulse, exciting diuresis and diminishing œdema and dyspnœa—acting, in fact, very similarly to digitalis. Dr. Poulet was induced by these researches to make trial of Coronilla varia in heart cases. He employs a tincture made from the entire plant (1 in 5), also a powder made from the flower. The dose per diem of the tincture is from half a drachm to a drachm, and that of the powder from fifteen to thirty grains. These preparations, though they have a strong characteristic odor, are not nearly so disagreeable to the taste as those of Coronilla scorpioides. Details are given of two very severe cases in which these preparations of the Coronilla varia gave almost immediate relief. M. Poulet recommends this drug also in other

heart cases where digitalis has been used, and where it seems to have been given for too long a period, or, as sometimes occurs, where it has begun to act on the gastro-intestinal canal.—*Lancet.*

HYPODERMIC INJECTIONS OF CARBOLIC ACID IN TETANUS.

Strazzeri and Titone report (*Rif. Med.*, Nov. 10th, 1891) a case of traumatic tetanus in which they effected a cure by Bacelli's method of hypodermic injections of carbolic acid. The patient was a boy aged nine, who had fallen on his right knee, bruising and slightly grazing the skin. Eight days after the injury he developed well-marked symptoms of tetanus. He was treated with injections of a 2 per cent. solution of carbolic acid repeated every six hours, opiates being given internally. The boy's surroundings were very unfavorable, as he was one of a large family living in a miserable hovel, which was shared also at night by a mule. In spite of this an improvement in the symptoms was noted after the first few injections. On the fifteenth day the patient recovered the power of mastication, and after four weeks' treatment he was completely cured.—*Brit. Med. Jour.*

DIURETIN.

Kress, (*Münch. Med. Woch.*, Sept. 22, 1891) in a paper reviewing what has already been written on this drug, and describing in detail his own observations in a large number of cases, comes to the following conclusions: Diuretin is a true diuretic, increasing equally the fluid and solid constitutents of the urine. Its action is due to a direct, unirritating influence upon the renal parenchyma; albumen does not appear in consequence of its action, and if already present in the urine its amount is not changed. The frequent favorable influence of the drug upon the organs of circulation is probably produced indirectly. The best results from its use are obtained in cases of acute and chronic diseases of the heart and kidneys, especially acute nephritis and uncomplicated valvular disease. Good effects may be expected in chronic nephritis, and myocarditis, whereas in simple serous effusions, as in tuberculosis, the drug is of no use.

Diuretin can be continued for a long time in large doses, two drachms a day, without any alarming secondary effects. The continued administration of the drug in cases of the above mentioned diseases, does not decrease its diuretic action.

A similar series of observations is recorded by Pfeffer, who strongly recommends diuretin, especially for cardiac dropsy and chronic renal disease. When compared with digitalis, however, diuretin is found inferior as a cardiac stimulant, while superior in its action on the kidneys. Pfeffer's conclusions in other respects resemble those of Kress.

SALICYLATE OF MERCURY IN GONORRHŒA.

The tendency to routine practice in medicine, has long been the bane of the profession. This should ever be reprobated by its friends. In no department of practice is this inclination so manifest as in the treatment for venereal diseases. Well nigh every physician has a "specific method" of treatment for syphilis and gonorrhea. To this is doubtless due the slow progress compared to the treatment of other diseases.

I do not propose, in this paper, to set aright the profession on this subject, nor to add too much to what is already known, I wish, simply, to present the results of an experience, which, if it only stimulates to further research, will amply repay the writer. Having long been in doubt as to the efficiency of the ordinary plans of treating gonorrhea, and having frequently suffered disappointment and chagrin at the tardy convalescence of my patients, I was led to inquire into the rationale of these plans, and consider what, indeed, was the true course to pursue. In this consideration the following points presented themselves: First: this is not an ordinary inflammation, but a specific disease—a peculiar poison, whose toxic properties are manifested in the pathological condition of the part affected.

Second: not only is the origin of the disease due to this cause, but its duration is also dependent upon the same element, present in the pus secreted from the mucous surface of the urethra. If the pus of gonorrhœa will produce the disease when brought in contact with healthy mucous surfaces, it is certainly capable of renewing itself constantly, and perhaps indefinitely as it comes in contact with the lining of the urethra from which it emanates.

Now, if the origin and duration of the affection be due to a specific virus, what is the indication for treatment? I naturally looked for some means by which I might rob the pus of its septic properties. Salicylate of mercury is the remedy I selected, and after a fair trial, in numerous cases, and in all

stages, I feel safe in urging its claims. My plan of treatment is: ℞ Salicylate of mercury grs. ii; aqua dest. oz. vi. Sig.—Inject 3 or 4 times a day.

I find this applicable in all cases, save, possibly, in some advanced stages of gleet where the poisonous element is not present.

In short, I claim that gonorrhœa is a disease due to a specific virus or toxic agent, the gonococcus, and the only method of cutting short its duration, is to rob the disease of this element which is its chief characteristic.—*W. W. Payne, M. D., in Miss. Med. Monthly.*

RAPID ANÆSTHESIA WITH CHLOROFORM.

Dr. M. Cordero reports further on this subject, giving forty new cases. The mortality of those operated upon was 17.94 per cent., but not one case could be attributed to anæsthesia. The mean time to produce complete narcosis was 8.07 minutes; average duration of operations was 18.6 minutes; the average time elapsing between sleep and normal consciousness was 3.19 minutes; the average quantity of chloroform employed for anæsthesia was 18.6 grammes (3⅔ drachms).—*Gaceta med. de Mexica*, vol. xxvi, 1891, p. 265.

SULPHATE OF MAGNESIA IN EPITHELIOMA.

The treatment of warts by the internal administration of small doses of sulphate of magnesium is said to have been attended with a considerable amount of success, even large growths disappearing under the remedy when persisted in for a sufficient length of time. It is now claimed, according to the *Medical Press and Circular*, that epitheliomatous warts may be dispersed by the same means, a paper on this subject having been read before the New Hampshire Medical Society, by Graves. Three drachms of the salt are added to 1 pint of water, and a teaspoonful of the mixture taken four times a day. The author gave an account of eight cases in which the treatment had been adopted with success; but he admitted that the possibility of erroneous diagnosis had to be considered. It was, however, a fact that growths of an elevated character with round or oval bases and ulcerated summits, discharging an ichorous fluid, were transformed by the treatment into perfectly healthy spots, which exhibited no signs of diseased structure, and his conclusion was that the result was obtained by the remedy employed.

STRYCHNINE NITRATE IN TOXIC AMBLYOPIA.

Dr. E. Melville Black makes a strong argument for the use of the nitrate of strychnine in tobacco and alcoholic amblyopia (*New York Medical Journal*, vol. liv. p. 287). The nitrate is chosen for hypodermic use because it is less irritating than the other salts. The site chosen is over the biceps muscle, and cleanliness and perfect solution of the drug (eight grains to the ounce in distilled water) are essential; the required dose may go to twenty or twenty-five minims. In dosage of over ten minims he keeps the patient under observation for a half hour after the injection. He instances four cases in which the patient's present condition, ophthalmoscopic examination and details of treatment were carefully recorded.

SUBCONJUNCTIVAL INJECTIONS OF CORROSIVE SUBLIMATE IN EYE DISEASES.

Darier, (*Arch. d'Ophtalmologie*, September and October, 1891) reports a series of cases from Abadie's clinic in which the treatment indicated in the title of his paper was adopted. This method of treatment seems to have grown out of the intraocular mercurial injections suggested by Abadie two years previously for cases of sympathetic ophthalmitis, and practised by Reymond and others. The syringe employed is Pravaz's, with the needle modified, so that it penetrates the conjunctiva easily and without tearing. The eye is first cocainized. Care is taken that the syringe is perfectly aseptic, the instrument being kept, when not in use, in 5 per cent. carbolized glycerine. Darier has found a 1 in 1,000 solution of the perchloride in boiled water preferable to stronger solutions, and injects from $\frac{1}{20}$ to $\frac{1}{10}$ of a cubic centimetre; the latter quantity contains 1 milligramme of the sublimate. The injection is followed by some œdema of the conjunctiva, and more or less pain of a burning character. The first two injections are given at two days' interval, the third and fourth three or four days later. The continuance of the injections will depend upon the effect produced, and the individual tolerance to the treatment. In cases evidently of a syphilitic nature, mercury should also be administered in other ways. The records published by Darier include cases of iritis and iridocyclitis, keratitis of several varieties, choroiditis, retinitis, and inflammation and atrophy of optic nerves. The results he considers decidedly encouraging in all except the optic nerve cases.—*Brit. Med. Jour.*

MEDICINE.

PRODUCTION OF GLYCOSURIA AND AZOTURIA AFTER TOTAL EXTIRPATION OF THE PANCREAS.

One of the most remarkable observations made on the pancreas in recent times is that of V. Mering, who found that total extirpation of the organ was followed by glycosuria. Hédon (*Comptes Rendus*, cxii, No. 18) has repeated these observations and confirms the statement that the total extirpation of the pancreas is followed by glycosuria and azoturia. But he also finds that the glycosuria may be intermittent, and may disappear for a time. In these cases the increased decomposition of proteids, as manifested by the increased azoturia, is the most pronounced phenomenon, and the same is the case when sclerosis of the pancreas is produced by injecting paraffin wax into the pancreatic duct. In some cases diabetes insipidus, or at least polyuria, may alternate with glycosuria.—*Brit. Med. Jour.*

URTICARIA OF THE THROAT FROM EATING MUSSELS.

At a meeting of the Société Médicale des Hôpitaux on July 3d, M. Laveran (*Sem. Méd.*, July 8th. 1891) showed a man, aged 30, who almost every morning suffered from urticarial eruptions, sometimes on the feet, sometimes on the hands, at other times on the shoulders, and more rarely on the face. On the morning of July 3d the throat had been the seat of the eruption, which produced considerable swelling of the uvula, the pillars of the fauces, and the tonsils. The eruption was accompanied by dysphagia and dyspnœa. When shown the same evening the uvula was still somewhat swollen; there was also a small patch of urticaria on the tongue and a larger one on the hip. M. Moutard-Martin said he had been called one evening to a lady who had been suddenly seized with dysphagia and a feeling of suffocation. Her tongue was swollen and projected beyond the arch of the teeth. He diagnosed urticaria of the mucous membrane of the mouth, and this diagnosis was confirmed by the occurrence during the night of a similar eruption on the lips and on the cheek. M. Rendu said he had some days previouly seen a child which, having first had an attack of urticaria on the forehead, face, and neck, was then seized with swelling of the throat, causing alarming dyspnœa. Diagnosis would have been very difficult had it not been for the eruption on the skin. M. Sevestre said he had once been called to a lady who, half an hour after luncheon, had been seized with distressing dyspnœa. The throat was extremely red and puffy. He was puzzled as to the nature of the attack, when under his very eyes an eruption of urticaria took place on the skin and soon spread over the whole body. The throat symptoms subsided in a few hours. An hour after seeing this patient M. Sevestre was called to see her son, aged 4, who had also been suddenly seized with suffocative dyspnœa. Exactly the same train of events was observed as in the mother. It turned out that both of them had eaten mussels at luncheon.—*Brit. Med. Jour.*

ZONA IN DIABETES.

Though there have been many injuries and disturbances of the nervous system recorded in diabetes mellitus, it still remains a matter of debate in Professor Vergely's opinion how far they are to be attributed to a central and how far to a peripheral origin. In the cases of neuralgia it has been held that the absence of local heat and vesicular eruption excluded all idea of neuritis. Some good authorities, among whom were Ziemssen, Charcot, and Buzzard, did not agree with this, but the first adequate pathological demonstration of the effect of neuritis on the diabetic nerves was made last year by Dr. Auché, of Bordeaux. The myeline was seen to be vacuolated and broken up, the axis cylinder had disappeared. The clinical symptoms had been sometimes œdema, sometimes glossy skin, perforating ulcer, malnutrition of the nails, and even gangrene. But among them zona had not been mentioned, and zona was almost certainly the result of a neuritis. The parasitic theory of its origin, which Dreyfous and Letulle—following Landouzy—had put forward two years ago, had been imperfectly supported, and it is necessary to reconsider the constitutional conditions of its origin. It was very rarely referred to as associated with diabetes in the special essays on either complaint. Professor Vergely brought forward two cases of diabetes mellitus, in which it had a marked feature, and which had been under long observation. The first was a man aged fifty-four, of powerful build and healthy history and habits. In middle life he began to get uncomfortably stout, and some sugar was noticed in his water. In May 1885, he had sharp neuralgia of the right side of his forehead, which was followed by a well-marked eruption of frontal herpes, which for at least ten days gave acute burning pain, and left a

deep scar along the course of the left supra-orbital nerve. The skin in this region thickened, and became gradually insensitive to pain, though remaining normally sensitive to touch and temperature. The amount of glycosuria did not greatly increase, but was complicated with albuminuria; all food was rejected; and the patient gradually sank into a uræmic condition, and died of exhaustion. The second case was that of a woman of forty-three, who had lived an active life, of good health till about thirty-seven, and since then had had much mental distress, and had begun to show signs of diabetes. When the percentage of sugar had become considerable, she got an acute neuralgia in the lesser right sciatic nerve with an abundant eruption of zona. The scars which were left were distinctly more sensitive to touch and to pain. As to what may be the temporary or permanent effect of the eruption on the secretion of sugar, and the best means of prevention and cure we have still much to learn from wider observation.—*Le Progrès Méd.*, September 26, 1981.

SPONTANEOUS AMPUTATION OF THE TOES IN SYPHILIS.

Viennois, of Lyons, reports (*Ann. de Derm. et de Syph.*, Nos. 8 and 9, 1891) a case of moist gangrene of the toes which he attributes to the effects of inherited syphilis. The history given by the patient, a man, aged forty-three, was that at four years of age he had had convulsions followed by paralysis, which at first affected all the extremities. This was recovered from except that the left leg remained somewhat contracted and the knee slightly bent. At eight years of age a red patch appeared on the lower part of the left leg, and finally broke into a sore. This began in the month of February and lasted until June, under medical treatment. He then remained well until, at thirteen years of age, another red patch appeared near the site of the former one. This also was in the winter, and the patch broke down forming a sore, which healed in about sixteen months without medical treatment. Again there was an interval of good health until he was twenty, when two more patches similar to the preceding formed on the same leg, and again in the winter, ran a similar course, and healed spontaneously in the following summer. From this time he remained well for twelve years, when at the age of thirty-two, the patient having in the mean time become much reduced in circumstances, red patches appeared on the backs of the second and third toes of the left foot. These at first behaved like those on the leg, but the resulting ulceration, instead of healing, continued to spread slowly for ten years, at the end of which time (October, 1890) he was first seen by Viennois, who found that the second and third toes had disappeared. The patient said they had dropped off four years previously. An offensive, sloughy, inflamed ulceration occupied the anterior fourth of the plantar surface of the foot, the plantar surface of the remaining toes, and part of the dorsum of the foot. Viennois diagnosed inherited syphilis because he had "precise information" that both the man's parents had had syphilis, the mother having had among other tertiary affections a perforation of the palate, and from the lesions above described, which he considered to have been gummata. The patient himself had never suffered from any venereal disease, and his wife and only child were healthy. Under specific treatment carried out at the man's home where the conditions were insanitary, only temporary improvement took place. He was then admitted into hospital under the care of Ollier, and there, under iodide of potassium and tonics internally and salol locally, cicatrization was complete at the end of a month. Viennois also refers to other cases of gangrene, both moist and dry, been recorded by various authors in connection with syphilis.—*Brit. Med. Jour.*

"TIC CONVULSIF."

Dr. Berthold Beer publishes in a Vienna journal a contribution to the treatment of "tic convulsif." He begins by stating the well-known fact that partial convulsions or involuntary muscular contractions are no rare occurrences. Clonic convulsions are frequently observed in a small lateral portion of the inferior part of the orbicularis palpebrarum. They often last for some minutes, and are generally symptoms of conjunctivitis or of slight pathological changes in the region of the palpebral margin, and in the ducts of the Meibomian glands. Many authors call these, as well as the clonic contractions of parts of a muscle, such as occur frequently in the bicipital groove, in the abdominal muscles, and in other parts, fibrillar muscular convulsions. The name is, however, really only applicable to the fibrillar convulsions after anæmia, which Sigmund Mayer described, and which may be well observed in the tongue and facial muscles of recently decapitated animals. In clonic convulsions of this kind the peripheral source of the

affection may be recognized by the dilatation and congestion of the neigboring blood vessels and by a slight inflammation of the muscular tissue. In this form of convulsions an anatomical alteration of the peripheral tissues near the affected muscle is found, but very frequently contractions of the palpebral muscles are observed, which may be considered merely exaggerations of the normal palpebral function. The twitching occasionally extends to the facial and frontal muscles, so closely connected with the palpebral muscles, and corrugation of the eyebrows and elevation of the alæ nasi, or of the angle of the mouth occurs. The mechanism of these contractions, which represent the simplest form of tic convulsif, and which, being merely considered bad habits, seldom come under medical observation, is of a reflex nature, resembling involuntary action. Other cases of tic of the kind which comes most frequently under medical observation may obstinately resist every treatment, until it is possible to remove the original cause of the attacks. This is generally situated in the nasal mucous membrane, the palate, the periosteum of the facial bones, or the alveolar margin. Cocaine is a most valuable remedy in such cases. In rarer cases the facial epidermis provides the means whereby the tic extends over a larger area, and in one case of this kind slight valvular dilatations in the infra-orbital region contributed to the greater intensity and frequency of the attacks. In such cases the usual and easily excited reflex and automatic movements may be also considered, as they may be the ultimate cause of the attack. This is especially the case when the affected muscles, from a cerebral or peripheral cause, have been temporarily paralyzed or weakened in their functional capacity. In such muscles reflex and automatic impulses, such as operate in sneezing, laughing crying, expressions of fear, and others, may be stronger than in healthy muscles. An appreciable disturbance of sensibility may not therefore be present, and yet local anæsthesia of the nasal mucous membrane may cut short the attack, and tic which has been caused by cerebral conditions may be improved by peripheral treatment. —*Lancet.*

"Eureka!" cried the young doctor.

"Why, what's the matter, my dear?" asked his wife.

"My fortune is made. If Pasteur and Koch can cure consumption and hydrophobia, why can't I take some Jackass virus and down asininity?"—*New York Herald.*

SURGERY.

THE OPERATIVE TREATMENT OF IRREDUCIBLE LUXATIONS OF THE THUMB.

Dr. Montez states that the operative treatment of this trouble has attracted but little attention, and some authorities have condemned surgical interference. Dr. Mortez, however, thinks that these patients should enjoy the benefits of antiseptic surgery, for the sake of improving the appearance of the thumb, even when its functions are not much interfered with. As regards the methods of operation, arthrotomy is not of itself sufficient to effect reduction, and section of the lateral and capsular ligaments has proved of no service. Resection alone is of value. The incision should be anterior and made over the head of the metacarpal bone; the periosteum and capsular sheath are detached, and the head of the bone excised. If the patient is young the periosteum should be abraded to avoid periosteal proliferations and anohylosis. —*La Tribune Medicale.*

STAB-WOUND OF THE SPINAL CORD.—A STUDY OF BROWN-SEQUARD'S PARALYSIS.

Neuman (*Virchow's Archiv.*, Bd. cxxii., Hft. 3), reports five carefully observed cases of wounds of the spinal cord at various levels, involving partly one-half of the cord and also the nerve roots. Only two cases corresponded with the genuine Brown-Sequard transverse hemisection. In one case oblique division was found affecting only one-half of the cord, although the marked hæmorrhage at the point of injury and the level of the wound presented the picture of a complete transverse separation. A change in the muscular sense, after a long time, was demonstrable only in one case, confirming Erb's assumption of a non-decussating course of the corresponding nerve tract. Ataxia was present in one case shortly after the injury. In every instance the victims fell to the ground immediately, some becoming unconscious. The loss of blood was generally considerable. There was high fever in two cases, without suppuration, having occurred during the healing process. The writer believes this was due to the injury of the nerve centres. In one case there was remarkable warmth of the body twenty-four hours after death, although it was winter. Injury of the anterior horns or of the fibre tracts, immediately after their exit, was suggested in two cases, owing to the interference with the growth of the limbs, and especially a lack of development of the

bones on the paralyzed side. In four cases the healing process progressed without complication, and in the course of time improvement took place without further treatment. In the opinion of the author, a cautious galvanic or faradic treatment is indicated, and may prove of value after healing of the wound. The absence of secondary and neuritic degeneration essentially differentiates these incised and punctured wounds in their course and especially in prognosis, from inflammatory and pressure lesions of the cord which present a similar appearance.—*Centralbl. f klin. Med., No. 39, 1891.*

SUCCESSFUL RESECTION OF GANGRENOUS BOWEL FOR INCARCERATED INGUINAL HERNIA.

Stern (*Berliner klin. Wochenschr.*, No. 41, p. 1011) has recorded the case of a woman, sixty years old, who came under observation after having presented, for a week, symptoms of intestinal obstruction, dependent upon an incarcerated inguinal hernia. An incision over the most prominent portion of the swelling in the right inguinal region confirmed the diagnosis and revealed the existence of peri-hernial suppuration. The incarcerated bowel was found gangrenous and perforated. Most careful antiseptic precautions being observed, the incarceration was relieved.

The healthy intestine, on either side of the gangrenous area, was firmly grasped by an assistant and a section of bowel, about two inches long, was removed. The free margins of the remaining intestine were approximated by means of Lembert sutures, the first suture being applied at the point furthest from the mesentery, the distance being progressively halved with each succeeding suture. After satisfactory approximation, the wound was closed and dressed. The subsequent course of the case was surprisingly uncomplicated. Twenty-five days after the operation the patient was able to resume her household duties.

MEDICAL CHESTS ON RAILROADS.

On all French railroads, even those of slight importance, having a physician in charge, there are medical chests on the trains. A principal physician, at a salary of $1,000, is supposed to supervise all the roads in France. This appointment has been abrogated, as no one man can inspect all the roads. Each company now has its own physician and surgeon to do the inspection formerly done at the expense of the State.—*La France Medecale.*

SURGICAL FILARIOSIS.

Moty, (*Revue de Chirurgie*, January, 1892) reports six cases of lymphatic varix in the groin and scrotum, due to the presence of filariæ in the blood and lymph. The patients all of whom had resided in French colonies, came under observation at the Val-de-Grace. This inguino-scrotal swelling, it is thought, may frequently occur amongst those who have returned to Europe after a sojourn in any of the districts infected by the parasite, the nature and origin of the affection being probably often overlooked. Moty discusses at length the serious questions relating to filariosis, and at the end of his paper gives the following summary: "(1) Filariosis is an aseptic parasitic affection. (2) It is due to the presence in the body of the filaria sanguinis hominis. (3) It is of very frequent occurrence in most of the French colonies, including New Caledonia. (4) It is most frequently manifested by dilatation of the glands and lymphatic vessels of the groin and spermatic cord. (5) The pathology of the filarial phenomena seems to consist in the irritative action of the filariæ and their embryos, both being nomadic on the cellulo-lymphatic system. (6) It is possible to base the diagnosis of filarial lesions on clinical data, but it ought to be confirmed by examination of the blood. (7) No results have yet been obtained from internal remedies in the treatment of filariosis. (8) Attempts at external palliative treatment cannot be strongly recommended; excision of the hypertrophied structures is indicated when their size causes much inconvenience. (9) In the course of such surgical interventions, living or dead adult filariæ may be removed with the diseased tissues."—*Brit. Med. Jour.*

INTESTINAL OBSTRUCTION FROM MECKEL'S DIVERTICULUM.

Oderfield publishes in the *Gazeta Lekarska* the particulars of an operation for acute obstruction of the bowel caused by the presence of Meckel's diverticulum. The distal end of the diverticulum had become attached to the mesentery, thus forming a loop through which a coil of intestine had slipped. The excessive formation of gas in the bowel had compressed the knuckle of intestine and caused it to become fixed. The author, in performing laparotomy, freed the incarcerated coil by separating the adherent end of the diverticulum, and to prevent a relapse he removed the latter by a circular incision at its base. The patient recovered. Oderfeld also discusses the mechanism, pathology, and

the various causes of this form of obstruction, and states that no case is known in which the cause of the obstruction was diagnosed before the operation. Two symptoms, however, possess a certain diagnostic value. When obstruction occurs in a patient suffering from harelip or some other congenital deformity, the former is probably due to the presence of Meckel's diverticulum. It is also important to have the history of the patient's early life. When during the latter an unbilical fistula has existed with fæcal discharge, which, however, has occasionally healed voluntarily, the same conclusion may be drawn.—*Lancet.*

SURGEON AND PATIENT.

Our attention has been directed to the case of Bachelor *versus* Gore, which came before the Supreme Court of New Zealand at the end of last year, and will be found fully reported in the *Otago Daily Times* of Decem- 23d, 1891. The following are the chief facts of this singular case, which was one of a claim on the part of Dr. Batchelor, the plaintiff, for a fee for medical attendance, and a counter-claim on the part of his patient, who was the defendant, for damages for alleged unskilful treatment. Mr. Gore, a contractor, aged 55, after having suffered during four years from pulpy disease of the right knee, for which he was first treated by Dr. Batchelor, and subsequently on and off by other practitioners, returned to the plaintiff in September, 1888, deteriorated in health and the diseased joint much disorganized. The plaintiff, convinced that it would then have been useless to persevere with expectant treatment, in which opinion he was supported by other experienced surgeons, excised the diseased joint. Although it is not clear whether amputation was proposed as being a much more promising method, there can be no doubt, from the evidence, that the patient absolutely declined to lose his limb. The age and unhealthy condition of the plaintiff being considered, it seems to have been a somewhat bold step on the part of Dr.Bachelor to undertake excision in this case. Notwithstanding the unfavorable condition, however, the correctness of his view was justified by the results, as it was shown by strong medical testimony, and also by the admissions of Mr. Gore himself, that the operation had been followed by complete success.

Firm union of the bones was much retarded, but this seems to have been unavoidable, as the patient, who was a restless man, insisted of sitting up in bed on the fourth day after the operation, and after the first week reclined daily in an arm-chair. The plaintiff, in cross-examination, acknowledged that he was able with his saved limb to descend steep embankments, to attend race-courses, and to visit mines. He is to be seen daily, it is stated, walking about the streets with a light stick, apparently quite restored to health, and able to follow his usual vocations.

After a brief consultation a verdict of three-fourth of the jury was returned for the plaintiff, awarding the full amount claimed. It is to be regretted that the jury did not adopt a suggestion of the plaintiff's counsel, and state, as they might justly have done, that there was no ground whatever for Mr. Gore's course of conduct. This is one of the worst instances of the "ungrateful patient" that we have met with, and we feel sure that the profession in this country will join their colleagues in New Zealand in congratulating Dr. Batchelor on the skill he has shown in this case, and on the result of this vexatious and unreasonable action.—*Brit. Med. Jour.*

ABORTIVE TREATMENT OF URETHRITIS.

Dr. J. W. S. Gouley. in a series of articles on "Disease of the Urinary Apparatus" being published in the *M. Y. Medical Journal,* speaks as follows of the abortive treatment of urethritis: "The treatment of acute urethritis was for a long time based upon erroneous notions of its nature, and directed to the substitution, as it was believed, of a simple, inoffensive, for a specific phlegmasia. This treatment, suggested in 1780 by Simmons, and afterward largely employed by Ricord, Diday and others, consisted of urethral injections of nitrate-of-silver solution (ten, fifteen or twenty grains to the ounce), and was named the abortive, to distinguish it from the methodical treatment. This supposed quick way was as delusive as it was alluring, alike to patients and to physicians, for it seldom cut short the attack of urethritis, and besides the great distress it caused, was often productive of grave effects upon the urethra and adjacent parts, the first effect being a super-acute urethritis, then peri-urethritis, lympangeitis, sometimes prostatitis, trachelocystitis, gonecystitis, orchitis, etc. Inasmuch as this too heroic treatment is still, though very rarely, recommended, it was thought necessary to give this note of warning to younger members of the profession against the employment of means which not only fail to remedy, but serve to aggravate the affection."

MECHANISM OF FRACTURES OF THE PELVIS.

Areilza (*Centralb. f. Chir.*, No. 41, 1891), who, as medical officer to large mines in the northwest of Spain, has had much experience of pelvic injuries, compares the features of fracture produced in the living body through injury with those of fractures artificially produced on the pelvis of the cadaver by a machine so constructed as to compress the bones transversely between a fixed and a movable plate. The following effects, it was found, are produced by gradually-increased lateral compression of the pelvic girdle; flattening of the iliac bones and increase of the antero-posterior diameter of the pelvis; separation of the bones of the pelvis and disruption of pubic symphysis and of the sacro-iliac synchondrosis; fracture of the pelvic arch, generally through tho horizontal ramus of the pubes; fractures near the symphysis and sacro-iliac synchondroses, and disorganization of these articulations. The following conclusions have been drawn from the results of numerous experiments, and from observations of thirteen cases of fractured pelvis, in the majority of which the urethra was wounded: (1) In injuries of the pelvis caused by pressure applied simultaneously to both sides, one iliac bone only is as a rule flattened and displaced, the other remaining unaltered; symmetrical quadruple fracture of the pubes and ischium on both sides is of very rare occurrence. (2) The nature of the injury is influenced to a considerable extent by the elasticity of the pelvic girdle; in consequence of this elasticity the bones regain their previous form and position after having been subjected to enormous pressure, so that in the living patient, and even on examination after death, it is difficult to determine what had been the nature and extent of the changes produced at the time of the injury. (3) Of the injuries of the soft parts, the more important are those involving the urethra. These are usually localized in the membranous portion. (4) Cases of complete laceration of the urethra and of perforation by splinters of bone being excepted, the most frequent injuries are caused by teasing of the aponeurotic structures attached to the margin of the pubic arch, as a result of displacement of the pubic bones, one of which often over-rides the other; these injuries consist in small lacerations, which rarely involve the whole thickness of the urethral wall, and which give rise to ecchymoses, hæmorrhage from the urethra, and, after a time, stricture. (5) The urinary effusion after injury from transverse pressure does not accumulate in the perineum, but passes upwards into the cavity of the pelvis, and thus constitutes a very grave condition, which should be treated by an early incision in the hypogastric region.—*Brit. Med. Jour.*

OBSTETRICS.

DEATH AFTER LABOR FROM TORN PERITONEAL ADHESIONS.

A. Holowko (*Zeitschr. für Geburtsh. u. Gynäk.*, vol. xxi, 1891, pt. 2) relates the case of a pregnant woman who suddenly felt pain in the abdomen after jumping when eight months pregnant. The temperature rose to 104° in a few days. Tonic contraction of the uterus was checked by warm baths and hypodermic injection of morphine. A few days later the patient was delivered, and rapidly became worse. The pulse increased to 140. No hæmorrhage occurred after the expression of the placenta, but the patient died in an hour. At the necropsy bleeding and torn adhesions were found between the ascending and transverse colon. There was no sign of sepsis, but the peritoneal cavity contained much blood. Tearing down of adhesions occurs when women who have undergone hysteropexy become pregnant.—*Brit. Med. Jour.*

MENSTRUATION AND LACTATION.

It is a generally received view that the supervention of menstruation during the period of lactation is prejudicial to the quality of the maternal milk supply, and therefore detrimental to the nutrition of the child. Most practitioners will probably state as a matter of observation that menstruation unfits the mother as nurse by reducing the quantity of the milk in addition to rendering it more "watery." In order to ascertain the real effect of menstruation on the quality of the milk, Dr. Schlicter has made a series of analyses which seem to show that the current belief is founded on defective observation. In addition to careful examination of the composition of the milk during and after menstruation, he had the child weighed and its general condition noted at and after the same period. He reports that in respect both of casein and fat, the milk secreted during menstruation compared favorably with that furnished prior to that date. The differences observed, moreover, in no case equalled those which occur in the milk of the normal healthy female at various periods of the same day; hence he declines to attach any importance to them.

He concludes by asserting that menstruation either before or after the sixth week can have no deleterious effect on the offspring.—*Med. Press.*

GYNÆCOLOGY.

THE USE OF THE ACTUAL CAUTERY IN GYNÆCOLOGY.

Dr. V. Stolypinski, in an article in a Russian medical journal, strongly recommends the more frequent use of the actual cautery in gynæcological operations, as, for instance, in the destruction of fungating cancer, for the arrest of bleeding from pedicles, and for the removal of small tumors. He uses it in the removal of the vaginal portion of the os, when required, for malignant disease, and recommends it on account of its easy application, the slight loss of blood, and the simple after-treatment. He reports only one case with an unsatisfactory result, obliteration of the os being found at a subsequent confinement.—*Lancet.*

INFLUENZA AND PELVIC CELLULITIS.

Sigmund Gottschalk (*Centralbl. f. Gynäk.*, No. 3. 1892) noted, in the same publication in January, 1890, the frequency of endometritis in influenza. It is associated with free hæmorrhages, and it is a common complication in the epidemic now raging. He has also seen three distinct cases where parametritis or pelvic cellulitis developed in the course of influenza. In two cases there was no evidence that the pelvic disease had previously attacked the patient. The first patient was a young girl aged 21, evidently a virgin. Eight days after the period she caught influenza, and profuse metrorrhagia occurred. For three weeks she suffered badly from bronchitis. Pains in the right iliac fossa set in during the first week; the flooding lasted for a fortnight, and was followed by free discharge. A very extensive hard swelling occupied the right side of the pelvis and pushed the uterus to the left. The second patient was 22 years old. As in the first case, severe metrorrhagia set during influenza. Then, when the fever was moderate, hypogastric pains occurred, and a characteristic parametritic deposit developed in the pelvis. The third case differed from the others, for the patient had suffered many years before from left parametritis. She was taken ill with influenza on January 6th, 1892. The temperature rose very high, and parametritis developed in the old scar. By the sixth day the patient began to improve, and a very extensive infiltration was detected in the left broad ligament. In none of these cases was there evidence of peritonitis or of inflammation of the tubes and ovaries. The influenza virus may, Gottschalk observes, directly attack the pelvic connective tissue. Otherwise, the parametritis must be secondary to the endometritis—a much more frequent and very distinct complication of influenza. The poison must travel through the lymphatics of the cervix, and not along the tubes.—*Brit. Med. Jour.*

TOTAL EXTIRPATION OF THE UTERUS FOR MALIGNANT DISEASE.

Gusserow (*Berliner klin. Wochenschrift*, 1891, No. 71) reports sixty-seven cases of total extirpation; in four of these laparo-vaginal hysterectomy was performed, with three deaths. He regards the latter operation as a dangerous one, to be undertaken only under exceptional circumstances, where the vagina is unusually narrow, or carcinoma is complicated with fibro-myomata. The total mortality 10.4 per cent. Of fifty patients who had been operated upon over a year before, sixteen were free from recurrence (one after the lapse of eight years), eleven had died from the disease, and one from pyelonephritis; eleven had a recurrence, and eleven were not heard from.

The writer believes that statistics will only be improved by early resort to the radical operation, at a time when the diseased tissue can be thoroughly removed. He rejects cases in which the vagina and broad ligaments are involved. Limitation of the mobility of the uterus (the patient being anæsthetized) by indurations in the parametria should be a contra-indication, even if the operator is not positive regarding their malignant character. By operating upon such doubtful cases vaginal hysterectomy is brought into disrepute. His strict adherence to this rule led the writer to operate upon only five per cent. of the cases treated by him.

THERAPY IN ALBUMINURIA AND NEPHRITIS OF PREGNANCY.

Mynlieff writes: (*Der Frauenarzt*, Heft 8, 1891) Prophylaxis aids us but little in preventing this unfortunate occurrence. We can recommend frequent warm baths, the wearing of woolen underwear, and prevention of all forms of excitement. If a chronic nephritis exists, the danger to the mother becomes so great—statistics show a mortality of eighty-four per cent.—that the induction of

premature labor is demanded. If an occasional albuminuria occurs during pregnancy, no treatment need be adopted besides unusual care and vigilance; but where a nephritis exists patient should be placed upon a strict milk diet. This often effects wonders; the quantity of urine becomes increased, the albumen disappears and eclampsia does not occur. If symptoms arise, warm baths and subcutaneous injections of pilocarpine do good service. Gramm and Schröder recommend the employment of the salicylate of theobromine (diuretin). Mynlieff believes that if a nephritis occurs in the early months of pregnancy, in a previously healthy woman, the induction of premature labor is indicated. When, however, it appears in the sixth or seventh month, then interference with the gestation is contra-indicated, except when very serious symptoms develop, such as dropsy, dyspnœa, etc.

PÆDIATRICS.

INFANTILE MASSAGE.

The *Medical Mirror* says: The young infant, which is restless shortly after birth as a result of its inability to accommodate itself to its new environment, should be given the benefits of massage not less than twice a day. The activity of the skin is thus developed, the circulation of all the external tissues is improved, and the child, if the massage is applied judiciously, is rendered restful. Many a time it will gently doze away into that land of Nod which is of such value in building up its force and strength under the gentle manipulations of the soft and tender hand. Not only is its nervous system soothed and comforted, but growth is stimulated for the reason that the growth is made perfect when the rest secured is more perfect, and when there is the greatest activity in the action of the component parts of the anatomy. An active skin, where exosmosis is most perfect creates an endosmosis between the tissues and the absorbents; the food which is partaken of by the child is more actively digested, more industriously appropriated, where there is that perfect activity of all the tissues which can be best accomplished by judicious massage.

That *bete noir* of the nursery—constipation—can be more thoroughly and permanently relieved and avoided by massage over the abdominal region than by any other method. The mechanical manipulation encourages peristalsis directly, and also urges onward, independently of the intestinal contractions, the contents of the intestine. The gentle rubbing of the liver encourages its action, and the secretions are less liable to accumulate. The effect upon the internal muscular system and the muscular coats of the intestine and of the various tubes to the secreting glands, from the stimulus furnished to the exterior is pronounced. The muscular system is 'a complete whole, and thorough exercise of the bulk of the system develops the working power of its individual parts, so that in massage in infants we must have, if applied thoroughly and well, a most potent factor for good.

TREATMENT OF DIPHTHERIA.

Smith (*The Practitioner*, No. 282, p. 430) has successfuly employed carbolic acid by continuous inhalation in seventeen cases of diphtheria. He ascribes the good results largely to the method of application. The patient is placed in bed, lightly clad and made to maintain the recumbent posture. Over him is placed a tent, made of a sheet, closed on all sides except in front. Cloths, about a foot square, soaked with a mixture of carbolic acid, one part, oil of eucalyptus, one part, and turpentine eight parts, (or less, according to indications), are hung about the patient, while the surrounding air is constantly kept impregnated with the vapor of steam. The cloths are to be re-soaked as they become dry. The patient should breathe through the mouth. If necessary, the nostrils may be loosely plugged with cotton-wool. The inhalations do not counter-indicate the employment of other therapeutic measures. Should there be depression, alcohol, digitalis, belladonna, or ammonia may judiciously be administered.

LITHOTRITY IN BOYS.

L. P. Alexandrow (*Deutsche Zeitschr. f. Chir.*, Bd. 32, Hft. 5, No. 6, 1891) has performed lithotrity thirty-two times on boys from one to fourteen years of age in the Olga Hospital for children, at Moscow. In twenty-seven of these cases the operation was successful, the little patients making excellent recoveries. In the remaining cases death occurred, in three from injury to the urethra during the operation, and in two from causes unconnected with the surgical procedure. Alexandrow's experience leads him to the following conclusions: Lithotrity is indicated in boys when the urethra is sufficient to allow the passage of a small instrument (No. 14) and the diameter of the stone does not exceed from 2 two 2½ centimetres (¾ inch to 1 inch). In other cases better results will

be obtained by suprapubic cystotomy with consecutive suture of the bladder.—*Brit. Med. Jour.*

THE SUB-MEMBRANOUS TREATMENT OF PHARYNGEAL DIPHTHERIA.

At the recent meeting of the American Pædiatric Society, Seibert (*New York Medical Journal*, Dec. 12, 1891)gave the results of fifty additional cases treated by sub-membranous injections of chlorine water. The ages of the children varied from six months to fourteen years. In forty-four cases the injections had been efficacious, in three there had been slight improvement, and in three none. Only four patients died, all of them being very severely affected, and evidently fatally so under any form of treatment. Recovery had taken place in from one to eight days.

The satisfactory results of the treatment were shown in a lowering of the temperature, improvement in heart's action, and disappearance of the false membrane. The chlorine water was the officinal preparation, freshly made, and was injected quite deeply so as to reach the sub-mucous tissue. In the majority of cases the author had found it necessary to make only one injection. A suggestive fact is embodied in the statement that neither paralysis nor nephritis had occurred in any of the cases that recovered.

HYGIENE.

ARTIFICIAL TEETH FROM A HYGIENIC POINT OF VIEW.

It is common experience amongst dentists that a very large majority of artificial dentures are discolored and by no means devoid of unpleasant odor. This lack of cleanliness, which arises sometimes from neglect, but very often from want of instruction on the part of the dentist as to the necessary *modus operandi*, is a fruitful cause of inflammatory conditions. Débris of food mixed with saliva and mucus accumulating on a plate rapidly undergo decomposition, with the result of irritating the mucous membrane and producing a general inflammation of the oral cavity. The oral secretions become altered and vitiated, so as to cause dyspepsia, and caries of the remaining natural teeth is set up, which proceeds with great rapidity, especially in "clasp" dentures, not from the friction, but because the inside of the clasps generally escapes the brush. The materials used in the construction of artificial dentures differ widely in their effect upon the tissues with which they come in contact. A larger number of inflammation of the oral tissues occur where vulcanite is used as a basis than with gold or other metals, and so prevalent is this inflammation in the case of vulcanite that it has received the distinctive appellation of "rubber sore-mouth." Several reasons have been assigned for the effects produced by vulcanite. Nearly all this material is colored with mercuric sulphide (vermilion), which ingredient has been accused of being the cause of trouble; but an exhaustive investigation did not substantiate this view, one particular point being that "rubber sore-mouth" often occurred where black rubber was used, which contains no vermiiion. The porosity of vulcanite, especially when not sufficiently vulcanized, renders it liable to retain deleterious material if not kept scrupulously clean.—*Lancet.*

COFFEE-TEA.

Mr. William Sowerby, the veteran and distinguished Secretary of the Royal Botanical Gardens, favors us with the following note on his pregnant suggestion for adding to the number of alkaloid beverages by the introduction of coffee-tea: When walking in the Gardens of the Royal Botanical Society, Regent's Park, and noting the extent of the collection of living medicinal and economic plants of all climes and countries there brought together in one spot, it must have occurred to all of us how very small a number of plants, out of the vast store which Nature has provided, man has bound to his service, and the yet fewer he has taken the trouble to cultivate. During the march of the last half century (in science, medicine, mechanics, steam, and electricity) how little has been the gain from Nature's stores. The artificial culture of cinchona is, perhaps, the most noted of the few. Again, any step in eating, drinking, dress, is so governed by habit or fashion that he must be a bold man who tries to turn the current. This is illustrated in tea drinking. Perhaps there is no one habit so universal; each people has its peculiar tea or closely allied beverage, and most of these have continued the same for many ages. In one it is cocoa, in others, coffee, and in many, tea; in a few special quarters of the globe nothing but *matè* is thought fit to drink, but in only one small district is coffee-leaf tea used. Now we all know that these beverages are found by man to be pleasant and agreeable to him by reason of their containing a peculiar princi-

ple called *theine;* but yet we do not always select for our use the part of the plant containing the largest percentage of *theine*, or cultivate the special plant with a view to afford us the most valuable part. For example, in coffee the leaves are said to contain 1.26 of theine, and the berries only 1.0 per cent, and yet over 110,000,000 of men use the berries, and only 2,000,000 the leaves of coffee, although 500,000,000 use the leaves of tea. Now the cultivation of coffee berries is very trying, precarious, subject to attacks of blight and unfruitfulness—in fact it follows the general line that the produce of fruit by cultivation is far more open to accident than that of the leaves, and very probably good crops of coffee leaves could be obtained at small cost in countries and localities where it would be risky or even impossible to produce berries. Here is a case open to a vast variety of people to solve, for there can be no reason why coffee leaves may not become a valuable item of culture in our warmer colonies and many parts of the world. The one most difficult item to move is to create the demand. Once start the fashion for "5 o'clock coffee-leaf tea," and the thing is done, and many a fortune made. As to the peculiar flavor of coffee-leaf tea much dedends on the manipulation of the leaf after it is taken from the plant. At the Botanic Gardens a variety of flavors have by treatment been produced from leaves off one plant, the general flavor being a kind of combination of coffee and tea so as to get both in one cup.—*Brit. Med. Jour.*

THE DISSEMINATION OF TUBERCULOSIS BY PASSENGER TRAFFIC ON RAILWAYS.

Incited thereto by Cornet's investigations, Prausnitz (*Central. für Bakt. u. Parasit.*, Sept. 18, 1891) investigated the dust taken from passenger trains for the bacillus tuberculosis. He chose for his experiments through-going cars, which were most used by consumptives. After the arrival of the train from Berlin in Munich, he swept up the dust collected underneath the compartment carpets of the selected cars, and mixed it up in a sterilized porcelain capsule, mixed a part of it in sterilized distilled water, and injected it into the peritoneal cavity of guinea-pigs. In this way twenty guinea-pigs were injected with the dust taken from ten compartments of four cars on five days. Of these twenty guinea-pigs, five developed tuberculosis. The dust used in these five cases all came from two cars. The experiments showed that the dust of railway cars, in which one would presume that large numbers of tubercle bacilli might be present, for the most part contains none of these germs, and even in the cars which are the longest on the road the dust contains but few. "The ordinary method of cleaning out railway passenger cars suffices to keep them so free of tubercle germs that danger to the traveling public in this respect seems to be excluded."

MEDICAL CHEMISTRY.

MYRTOL—SO-CALLED ESSENCE OF THE MYRTLE.

An anonymous writer in the *Gazzétta Chimica Italiana* states that the name myrtol, as applied to the essential oil of myrtle, is improper, since the oil is found by late investigations to be composed of two substances, one of which is an isomer of turpentine, and the other an oxygenated body, an isomer of camphor.

TESTING FOR SUGAR IN URINE.

Dr. G. Vulpius, of Heidelberg, suggests a method of insuring the correctness of the conclusions derived from applying Trommer's test to urine suspected of containing sugar (*Pharm. Post*, 1892, 7).

It is well known that the urine contains some normal and may contain abnormal constituents which will, at least under certain circumstances, cause a reduction of the test solution (Fehling's) with production of red cuprous oxide. Such substances are: uric acid and creatinin, when present in large quantities; milk sugar, allantoin, mucin, pyrocatechin, hydrochinon, urobilin, biliary pigments. The same reduction occurs after the administration of benzoic, salicylic, or oxalic acid, glycerin or chloral. Hence it is always advisable to employ, alongside of the alkaline copper sulphate reagent, a second one which is not liable to the same drawback The most preferable are: the fermentation test, the polariscope test, or Nylander's alkaline bismuth tartrate solution.

On the other hand, it often happens that, though urine contains sugar, yet cuprous oxide fails to separate in consequence of the presence of certain compounds interfering with its precipitation. Such compounds are: ammonium salts, creatin, albumen, and products derived from the latter by the caustic alkali of the reagent itself. The interference of ammonium salts may be overcome by heating the urine with caustic alkali until all

the ammonia has been dissipated. In the presence of the other substances a separation of cuprous oxide may often be promoted by suitably diluting the urine after it has been boiled with the reagent, or by cooling it, or in other ways.

The non-appearance of a reaction, when Fehling's test is applied to a sample of urine, is, therefore, not an absolute proof of the absence of sugar. But there is a very simple method to make the result certain, as will be seen presently. If the reaction is prevented by the presence of bodies such as those before mentioned, it will be readily understood that, even if a small quantity of glucose solution were purposely added to the urine, the separation of cuprous oxide would still be prevented. Of course the quantity of glucose thus added must be properly regulated, and the test is best made in the following manner: Heat two test tubes, each containing 5 cc. of Fehling's solution, until the latter boils, then add to one of them 1 cc. of the suspected urine previously diluted with an equal volume of water, and to the other 1 cc. of the same urine previously diluted with an equal volume of a 1 per cent. aqueous solution of glucose, and again apply heat until the contents of the test tubes boil. If there is now still no change in the two liquids, it may safely be concluded that there are substances present which interfere with the reduction of the copper salt. In such cases, then, recourse must be had to other reliable sugar tests. If, however, there is a reduction in the test tube to which glucose solution was added, this proves the absence of substances interfering with the test; hence, if no reduction took place in the test tube to which the urine was added, the latter may be safely regarded as free from sugar.

HYGROSCOPIC CHARACTER OF CAMPHOR AND THYMOL.

In the course of a physiological investigation of the irritability of a fungus, Professor Errera was led to the conclusion that camphor possesses a considerable hygroscopic capacity, which is not shared by thymol. Accurate experiments by Herr Clautriau have substantiated this opinion, and show that whereas 40 grains of camphor will absorb 0·054 gm. of water from air saturated with aqueous vapor at 16° C., thymol does not perceptibly increase in weight under the same condition. The absorption of water by camphor must be purely a physical phenomenon, since the condensed moisture is readily removed even under the influence of anhydrous camphor. The dry substance, although it attracts a comparatively small quantity of water, does so with such energy that its weight increases even in air containing but little moisture.

A GENUINE TEXAS SHOTGUN.

Meyer Brothers' Druggist, publishes the following: Below find a correct copy of a prescription handed me to be filled not long ago. Please publish as a genuine shotgun. If any of the boys can beat it I would like to hear from them through your columns:

Oil tar	dr. ss
Oil cubeb	dr. ss
Tincture phosphorus	dr. ¼
Spirits of eucalyptus	dr. ss
Nitro glycerin	dr. ¼
Tincture boyberry	dr. ss
Nitrate sanguinaræ	gr. ij
Sul hydrastes	gr. vij
Boracic acid	gr. xx
Asepcine	gr. iv
Iodine	gr. ij
Alum pulverized ex.,	dr. j
Sulphur	dr. ij
Lycopodium	dr. iij
Vaselin	oz. j

M. Et. ft. ungt. Sig.: Use three times per day.

——, M. D.

It ought to make a hit!

NEWS AND MISCELLANY.

HOW TO IMPROVE THE POSITION OF THE PROFESSION.

Dr. Orlando Jones, in his presidential address to the Harrowgate Medical Society, took for his subject the Possibility of Improving the Position of the Medical Profession. He infers from the writings of Pliny, the medical learning of Druids, and from those of Ptolemy, that their wealth was equal to their learning. Such being the honored and happy case of the ancient representatives of medicine, he argues that it should not be otherwise with the present practitioners. He does not look for any amelioration in the position of the profession by attacking the Council of the Royal College of Surgeons, or by a mere increase in the direct representation of the profession in the Medical Council. These are his negative views. The first of his positive suggestions for improving the tone of the professson is the introduction of a law enforcing at least one year's apprenticeship before the commencement of medical study; the second is the formation of a fund for the benefit of the profession, encouraging thrift among the active and giving help to the less fortunate. There is something to be said for both suggestions, but we confess to thinking them entirely inadequate as the sole levers by which the positive tone and power of the profession are to be raised.—*Lancet.*

THE SONG OF THE BACILLUS.

Once I flourished unmolested, now my troubles never cease;
Man, investigating monster, will not let me rest in peace.
I am taken from my kindred, from my newly wedded bride,
And exposed—it's really shameless—on a microscopic slide.
Sure some philbacillic person a society should start
For protection of bacilli from the doctor's baleful art.

Koch the evil game first stated, and his lymph came squirming in,
But, 'twixt you and me, bacilli did not care a single pin.
We went elsewhere in the body, and it only made us roam.
But it's hard, you must admit it, to be worried from your home;
And methinks the hapless patient had much rather we had rest,
When he finds us wildly rushing up and down his tortured breast.

Then came Bernheim and his dodges; his specific is to flood
All the circulation freely with injections of goat's blood.
That is really rather soothing, and it doesn't seem to hurt,
Though they lacerate your feelings with an automatic squirt;
Time will show if it's effective, but 'twill be revenge most sweet,
If the patients take to butting every single soul they meet.

Next fierce Liebriech, quite a savage, has declared that we shall die,
Shattered and exacerbated by the dreadful Spanish fly,
We should like to ask the patient if he thinks he'll live at ease
With his system impregnated with that vile cantharides?
We perchance may fall before it, waging an unequal strife,
But it's any odds the patient will be blistered out of life.

Therefore, O my friends, take heart, and these indignities endure,
Although every week brings news of an indubitable cure;
We have lived and flourished freely ever since the world began,
And our lineage is as ancient surely as is that of man;
While I'll venture the prediction, as a wind-up of my song,
That, despite these dreadful doctors, we may haply live as long.

—*From Punch.*

THE ODOR OF FLOWERS is controlled, as has lately been shown, by light and partially by air; excluding these agents flowers cease to exhale their perfume.

NEW BUILDINGS FOR THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA.

The Board of Trustees and the Faculty of the Jefferson Medical College have just completed the purchase of two large lots on Broad street, giving them a frontage of about 300 ft. and a depth of 150 ft., upon which they will proceed to erect at once a handsome hospital, lecture hall and laboratory building. The estimated cost of the building is $500,000. The hospital will be built not only as a suitable building in which to care for the sick and injured, but also will be provided with a large amphitheatre for clinical lectures. The basement of the hospital building will be given over to the various dispensaries, each of which will be provided with large waiting and physicians' rooms, as well as rooms for direct teaching for students. All the buildings will be absolutely fire proof and provided with patent sprinklers in case their contents catch fire. By the erection of three commodious buildings, the laboratories where delicate work with the microscope or apparatus is carried on, will be separated from the college hall where didactic lectures are given and so will be free from any jarring produced by the movement of large classes. With the hospital on one side affording clinical facilities, and the laboratory on the other side of the college hall for scientific research and training, the college will be most favorably situated for giving thorough instruction in medicine. Further than this, immediately across the street is the Howard Hospital, and on the adjoining corner the Ridgway branch of the Philadelphia Free Library, which contains all the scientific works belonging to this wealthy corporation. The new site is even more favorably situated in regard to the centre of the city than the old one at Tenth and Sansom streets. The move has been made necessary by the large number of students who are now being instructed in this institution, and because the Faculty desire to keep the school and hospital in the foremost rank of medical education in this country.

The buildings will be ready for occupancy in the session of 1893 and 1894.

DEATH BY HANGING.

The *St. Petersburger Medicinische Wochenschrift* gives a *résumé* of a paper by A. S. Ignatovski on the cause of death by hanging. He refers the rapid loss of consciousness after suspension to the retarded or arrested circulation in the brain brought about by the increased intra-cranial blood pressure. The

effect of this impediment to the circulation is the same as in cerebral anæmia, for in both the nutrition of the brain suffers. It is therefore, not as Leofman teaches, an insufficient supply of blood to the brain, due to compression of the carotids, which interferes with the functional activity of the brain, but compression of the capillaries by increase of the intra-cranial pressure, which has this effect, and which occurs whilst the supply of blood remains the same, or even increases.—*Lancet.*

PHYSICIANS IN CANADA.

Dr. R. W. Powell, of Ottawa, says (*Montreal Medical Journal*) that Canada has about 4,180 medical practitioners, arranged by provinces about as follows:

Ontario	2,300
Quebec	1,110
New Brunswick	170
Nova Scotia	300
Prince Edward Island	60
Manitoba	140
Northwest Territories	50
British Columbia	60
	4,180

TANNIN IN DIPHTHERIA.

Goyard has for several years followed this method of treatment in diphtheria with very satisfactory results (*Traitement Abortif au Croup et de la Diphtérié par le Tannin*, G. Carré, Paris, 1891). The treatment consists simply in the free application of tannin to the naso-pharynx. He uses for this purpose a round sponge, about half the size of an ordinary thimble, fastened to a piece of whalebone. Having first dipped the sponge in water and squeezed it between the fingers, he covers it with tannin by thrusting it into a box containing that substance, without weighing or measuring the dose. The patient being in the sitting position with his head a little raised, the tongue is held down with the left index, which is used as a guide for the sponge. The essential point, according to Goyard, is to get the sponge well beyond the isthmus faucium; after being kept for a second or two against the posterior wall of the pharynx it is withdrawn. When the disease is slight and in the incipient stage one application of this kind is said to be sufficient; in a case of croup or diphtheria following the ordinary course the tannin should be applied every two hours, the frequency of the local medication being reduced as the local and general symptoms of the disease subside. Goyard thinks the same method is indicated in all anginæ and laryngeal inflammations of miasmatic origin. The earlier the treatment is begun the more successful it is, and he urges the routine use of the tannin method in all cases of sore throat as a preventive of graver forms of disease.—*Brit. Med. Jour.*

PRESCRIBING OPTICIANS.

The law relating to the practice of medicine on the Continent is, as we know, administered with a far juster regard for the interests of all concerned than it is in this country, the reason of which is that it is not left to corporations and colleges to take action when rights are infringed and all illegal practice openly carried on. This is made manifest by a decision given by the law courts at Havre. An optician was successfully prosecuted for giving advice as to the condition of a patient's eyes, and who prescribed glasses to remedy the defect of vision. The court ruled it to be just as illegal to order spectacles as to order remedies or give medical advice without being a possessor of the diploma recognized by law. Prescribing and advertising opticians are becoming a nuisance in London, and will soon require to be looked after by the Medical Defence Union.—*Med. Press.*

POLYPHARMACY.

A Birmingham (Ala.) pharmacist, sends the following copy of a prescription he has on file:

℞

Syr. simplex,
Syr. limonis,
Fl. ext. cascara sag.,
Fl. ext. lupulina,
Fld. ext. euonymus atropurp,
Fl. ext. yerba santa,
Fl. ext. hydrastis canad.,
Fl. ext. pruni virg .....āā ʒ ss.
Fl. ext. berberis aquifol..... ʒ ij.
Fl. ext. mangifera ind.,
Fl. ext. jaborandi.....āā ʒ ij
Fl. ext. barosma betulina,
Fl. ext. uva ursi,
Fl. ext. kava kava,
Fl. ext. ailanthus glandulosa,
Fl. ext. saracenia flava,
Fl. ext. cimicifuga racemosa.....āā ʒ ij.
Fl. ext. cereus grandiflor.....ʒ ss.
Fl. ext. pumus boldo..... .....ʒ j.
Fl. ext. piscidia erythrina .....ʒ ss.
Fl. ext. rad. aconiti.....ggt. xx.

M. et sig.: Use as directed.

This the correspondent thinks will compare very favorably with "Venice treacle."—*Amer. Drug.*

It has also been pointed out that the greatest number of perfume-scented flowers are white, while those of brown and orange color generally possess a disagreeable odor.

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CLINICAL LECTURE.

MYOSITIS.

By PROFESSOR H. LINDNER,

BERLIN, GERMANY.

Gentlemen: Primary inflammations of the muscles are very rare. Ample proof for this assertion is evident in the fact that every typical case yet reported has been found in the largest clinics or hospitals, where the material offered is most extensive; besides this, the cases reported have been but very few in number. The small number of cases reported might lead one to believe that this line of affections possessed but little practical importance; if we look closer, however, and examine the histories of individual cases we will find that in every case reported there were considered diagnostic difficulties. Apart from the surgical interest in these cases, there is another point interesting to pathologists, in reference to the pathogenesis and pathology of the disease, and this is that in the reported cases of myositis in the majority of instances it has been impossible to obtain any material for microscopical examination, and in those cases in which the possibility has been offered and the specimens obtained they have been subsequently lost.

The study of acute myositis is much more simple, since the reported cases—especially those collected by Von Scriba* and Walther†—clearly show that we are dealing with a localized infectious process. Although the material we have had at our disposal is yet very meagre, still it is most probable that in the near future our knowledge of the pathology and etiology of this affection will be considerably broadened.

A most peculiar and interesting case occurred in the practice of Dr. Reuter, and as I had an intimate knowledge of it—being called in consultation on several occasions—I will recite its history. In doing so I will quote from the notes of Dr. Reuter, which he has very kindly placed at my disposal.

The patient was a woman, 28 years old, who had been married for about three months. One day while walking in the street she experienced a sudden, sharp pain in the calf of the left leg. The parts became gradually more and more swollen, and when a month later the patient presented herself for examination the greater part of the gastrocnemius muscle was found to be invaded by a dense, hard infiltration. The swelling was not painful, and the patient was not confined either to her room or bed. There was no fever. Hot fomentations were applied, and subsequently at one point there was a slight softening. This point was opened, but nothing else than serum was evacuated. Soon after the opening was made, however, a profuse fetid discharge began—occasioned, undoubtedly, by the entrance of the atmospheric air. The wound became enlarged, and during the course of the following weeks, one could pull large pieces of necrosed muscle of a yellowish-gray color out of the wound. At the same time three or four abscesses opened spontaneously at different parts of the muscles, from which also large pieces of necrosed muscle were removed.

In the meanwhile the patient went about her daily duties as usual, feeling entirely well, and only coming to the hospital at intervals when the opening of a new abscess, or rather the pressure prior to its opening, gave her feelings of distress and some fever.

Six months after the first intimation of the disease, the necrotic process ceased entirely, and a month later the healing of the parts was complete. The patient has experienced no subsequent difficulties, and the limb which was affected is no weaker than the other, although its circumference at the calf is fully 2 c. m. ($\frac{3}{4}$ inch) less. There is no infiltration remaining in the muscle.

The treatment consisted primarily in the useless exhibition of iodide of potash for

**Deutsche Zeitschrift für Chirurgie*, xxiii, p. 497.

†*Ibid.*, xxv, p. 260.

three weeks. Subsequently, hot applications and poultices over the fluctuating parts until they opened, after which the wounds were dressed with creolin and rotterin.

The healing seemed to be hastened most decidedly by local bathing of the parts with sea-salt and water, and this treatment also seemed to facilitate the discharge of the gangrenous portions of muscle. The question, however, very naturally arises as to whether or not a similar bathing of the parts with plain water would not have accomplished equally good results.

The pieces of muscle taken from this case have been hardened in alcohol and subjected to a most careful examination. But I have only been able to find evidences of a muscular necrosis, with no infiltration or pus formation. In many of the fragments the muscular fibres have entirely disappeared, in others they may still be recognized by their contour, but their normal structure is entirely absent. The inner portion of the muscular fibres was entirely absent, and the fibres looked like hollow tubes, collapsed, tangled, and nicked. No bacteriological experiments were made at the time.

No other similar case to the above has as yet been published. The etiology would seem to point beyond all doubt to an infectious process, but to define this process is no easy task.

More difficult even than in the case of acute myositis, is the etiological definition of the chronic forms. This for the one reason that we are not always able to undertake surgical measures, and therefore are unable to obtain a view of the process as is the case in the acute form.

It seems—and I use the term "seems" advisedly—that there are two forms of chronic myositis: the parenchymatous and the interstitial. Pathological anatomists have left us entirely in the lurch regarding any data concerning chronic iodiopathic inflammations of the muscles, and all direct knowledge has been gleaned by traumatic processes.

When I said that there were two forms of chronic myositis, I should have added that I can furnish no anatomical proof for the existence of the parenchymatous form, since the only specimen I had in my possession has unfortunately been lost. Still, from the course of the case and the evidences gleaned from the specimen in question, I feel justified in having advanced the diagnosis of chronic, or more correctly subacute, parenchymatous myositis.

The patient was a poorly nourished young woman, who subsequently died of pulmonary tuberculosis, and whom I had been already treating for several months for abdominal troubles. The disease began by "tearing" pains in the right side, unaccompanied by any fever. Gradually a hard swelling appeared which occupied the entire iliac fossa. This swelling was painful upon pressure, and at certain points seemed to give evidence of a tense fluctuation. The accompanying stubborn constipation of the patient, and the region of the swelling, seemed to point to a probable disease of the cæcum and surrounding parts. So, I concluded to make an exploratory incision, and although I explored down to the sacrum, found no trace of pus, but only œdematous fluid. The muscles were remarkably hard, very pale, and waxy; the interstitiæ hardly recognizable, and apparently filled up by the swollen muscles. This condition rendered the exploration most difficult. Although the object of the operation was not accomplished, the disease subsequently disappeared within a few months. Probably this result was due to the release of pressure gained by the division of the fasciæ.

The finding in this case points to a process in the muscular fibres themselves. If the theory of an interstitial change were advanced in this case, then the narrowing of the spaces between the muscles could not be explained, for in such an event the spaces would be enlarged and the muscles easily divided. Cases, in which the muscles were similarly acutely and extensively diseased have been reported by Hepp. One of the cases died, and in the microscopical examination of the muscles, subsequently made by Recklinghausen, a parenchymatous inflammation and degeneration of the muscles was demonstrated.

Concerning the second form of chronic interstitial myositis, called "rheumatic" by Froriep, and *myositis fibrosa* by other authors, I am pleased to be able to show you, gentlemen, a most interesting case.

The patient is a woman, fifty-three years old, who came to this hospital* suffering from a most painful swelling of the leg from the knee down. Ten years ago she began to notice a gradually increasing weakness of the left lower extremity. The ankle-joint became swollen, and subsequently this swelling extended to the calf of the leg and nearly to the knee. The patient had complained of especially severe pains at night. These pains assumed the form of a severe burning sensa-

*Augusta Hospital, Berlin, Germany.

tion, the parts affected even feeling hot to the touch. Rest to the limb and cold applications afforded her considerable relief. The patient also says that the swelling and pain have both been greater or less at times. Until two years ago the patient, in spite of her pain, was able to walk without assistance, since then she has been bed-ridden for one year, and during this time the swelling of the leg materially increased in hardness. The patient claims previously always to have enjoyed the best of health. There are no evidences of syphilis and no specific history.

At present you see that the entire left leg from the knee to the ankle-joint is considerably larger than the right, and as hard as a board. It is impossible to distinguish muscle from bone, and it would therefore seem that the limb is surrounded by dense tumor originating from the bone. The skin is only slightly movable, infiltrated, and the veins enlarged. No part of the swelling seems especially painful to the touch, although the patient complains of most intense spontaneous pains. No soft or even points of a doughy consistency can be found; the position of the foot is normal. The temperature of the diseased limb is not different from that of the other.

My diagnosis wavered between a chronic inflammatory process and sarcoma. In order to confirm either diagnosis, I have not long since made several incisions—the patient being anæsthetized—and am positive of the correctness of my first surmise. All the muscles of the calf of the leg were transformed into a dense tissue, which crackled under the knife. The parts most extensively affected—the peronei muscles—were almost pure white, with a few scarcely visible, pale-red spots or strips; while the parts less affected—especially the gastrocnemius muscle—were covered more regularly with these red spots, while in the white substance of these muscles was a yellowish red, and plainly muscular substance visible at various points. Under the circumstances I concluded to refrain from any further surgical interference, and determined to try the effect of hot baths, etc., after the operative wound had healed.

The microscopical examination of portions of the peroneus muscle, which had been excised, showed these to consist almost entirely in tendinous connective tissue, in which isolated, atrophied muscular fibres could be distinguished. In the pieces of muscle excised from the gastrocnemius, bundles of muscular fibres were found, separated by broad divisions of loose connective tissue, which latter in many places is even found between the simple fibres. The fibres are considerably narrowed, the lateral stripe having disappeared, but a longitudinal stripe being very plain. The nuclei seem to be increased in number, although this apparent increase may possibly be due to the fact that the nuclei are brought closer together, giving an appearance of an increase of number.

Now, the woman's condition has not materially improved, and, indeed, an ultimate recovery from the local process is very questionable. The possibility of an ultimate recovery would be slim indeed were it to rest upon the necessity of the restoration to a normal condition of these muscles which have been strangulated by dense connective tissue, or in some instances even obliterated. Cicatricial connective tissue cannot well be regenerated into healthy muscle.

The local pains which the patient complains of so constantly, apart from the severe functional disturbances, no doubt have their origin in a strangulation or constriction of the nerves within the dense cicatrized or connective tissue.

Regarding the pathology of chronic myositis, in all the cases that have come to my notice the diagnosis has primarily wavered between myositis and sarcoma, and has only been confirmed after an exploratory incision had been made. Gies recently reported a case in which he had confirmed a diagnosis of chronic myositis at the end of the femur, by means of an exploratory incision.

It is furthermore an open question as to whether or not in the severer and more extensive forms of chronic myositis the same treatment as in severe cases of sarcoma would also be advisable—viz, amputation of the limb. The gain the patient enjoys by the retention of such a limb—as in the case before you—is entirely illusionary, especially when the constant pain and absolute uselessness of the limb is taken into consideration. And, indeed, the unnecessary postponement of such an operation might lead to a spreading of the disease.

In the case reported by Gies, and also in the one reported by Kreiss, recovery was obtained by the use of electricity and massage; and in light cases such a treatment is undoubtedly not without promise.

Regarding the prognosis, I have touched upon it sufficiently during the course of this lecture.

The etiology remains obscure, unless we would infer that rheumatism—that patient but victimized ailment which answers for so

many indefinable maladies—is its original cause. This theory is, however, of little weight, even when our limited pathological researches are taken into consideration.

PROLAPSUS UTERI, COMPLICATED BY SUPRA-VAGINAL ELONGATION OF THE CERVIX — ABDOMINAL SECTION FOR PUERPERAL SEPTICÆMIA.

By E. E. MONTGOMERY, M. D.

Professor of Obstetrics and Gynæcology at the Medico Chirurgical College—Obstetrician to the Philadelphia Hospital, and Gynæcologist to St. Joseph's Hospital.

Gentlemen:—The patient I propose to bring before you now is a woman thirty-eight years of age, whose occupation is housework; she was married at 16 years, and has given birth to four living and two dead children. Menses are regular, lasting three days and are accompanied with pain in the back and head, and with occasional inability to urinate. She suffers from profuse leucorrhœa, and this distress has been increased for the last two years. Bowels regular, appetite poor.

As we separate the limbs of the patient, you see there is a protrusion from the vulva; this protrusion is hard and dense. the finger can be passed in front of it, showing that it is not a cystocele, and in the same way posterior, which indicates that it cannot be a rectocele; we consequently must have then, a descent of the central portion of the vaginal canal or of the uterus. Prolapsus of the uterus varies in degrees: thus, where it has descended and is situated just within the vaginal orifice, it is known as first degree; where a portion protrudes through the vagina, it is prolapsus in the second degree, and where the entire uterus is protruded, it is known as the third degree or procidentia. In this patient the condition is one of incomplete prolapsus, as when a portion of the surface projects from the cavity and the finger can be passed anteriorly and posteriorly nearly the normal length of the vagina. In this condition consequently, with the fundus of the uterus situated high up, with the vaginal walls retaining their normal length and relations, we have to deal with a condition complicating prolapsus, and that is one in which the cervix has undergone elongation in its supra-vaginal portion, and consequently is known as supra-vaginal elongation, or hypertrophy of the cervix. This condition is one which is likely to take place where the perineal or pelvic floor has undergone disaster during parturition, and the uterus or vaginal walls are no longer supported.

The heavy anterior or posterior vaginal wall dragging upon the cervix will lead either to the displacement of the entire uterus, or in those conditions in which the fundus of the uterus is fixed by a healthy condition of its ligaments, or by inflammatory adhesions, the cervix itself is dragged upon, until, like any elastic tissue, it becomes elongated, in some cases forming a mere thread-like structure connecting the prolapsed portion with the fundus of the uterus above.

This patient, however, differs from the cases thus described, in the fact that there is no turning out of either the anterior or posterior vaginal walls; we have consequently an elongation of the cervix which has originated from the weight of the lower end of the cervix itself. If we come to investigate this, we find that the organ is quite dense and firm, enlarged, that it has undergone a bilateral laceration, and the ends of the cervix or lips are widely separated, giving it the appearance of the condition so aptly described by Goodell as a celery-top cervix. It is this organ, then, which has given rise to the elongation of the supra-vaginal, or intra-vaginal cervix. As I place my finger anteriorly and posteriorly to this, I find that the lower end of the cervix is quite large, spread out, while above it is very much contracted and cord like. The condition here has undoubtedly originated in the bilateral laceration of the cervix, which has taken place in some one of her labors, possibly an early one. The efforts on the part of Nature to restore the condition has led to induration, thickening and increased weight, and dragging upon the parts above, until this elongation has resulted.

In such a condition the patient necessarily complains of the sensation of dragging, weight and want of support, and in the upright position as if everything was about to fall out. There is also a great burning in the region of the cervix, and in the bladder. This burning, particularly of the cervix, is necessarily induced by the exposure of the delicate mucous membrane, and by friction of the sur-

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* Clinical lecture delivered at the Medico-Chirurgical Hospital, Feb. 9, 1892.

face against the body of the patient, and against her clothing, with frequent bathing in the urine as it is voided. This, in some cases, leads to extensive ulceration. Bladder symptoms are not unfrequent in such states.

The traction upon the anterior vaginal wall leads to displacement of the bladder, which is closely associated with it, so that a portion of it is still below the internal orifice of the urethra, and is only emptied when the organ is pushed up. The retention of a portion of the urine in this way soon leads, by the increased amount of mucus secreted, to the disposition to inflammation of the mucous membrane, to burning and distress, to frequent micturition, and from this condition not unfrequently result calculi, sometimes of considerable size. It is a serious question in a patient suffering from a condition of this kind, as to what shall be done for her relief. How can the uterus be replaced and retained in its normal position? There are a number of mechanical appliances for the retention of a replaced uterus. We can readily understand that internal pessaries in such a patient would be of little value, for the reason that the cervix is so greatly elongated that it is likely to fall through the pessary, and if we should use the disc pessary, or one with a view of blocking up to a certain degree the outlet, and holding the cervix above it, the pressure upon the cicatricial tissue, and delicate cervical mucous membrane would result in abrasion, ulceration, and irritation so great as to render it unbearable, or would develop very rapidly a malignant disease.

Pessaries for external support are equally objectionable, so that we would dismiss the idea of attempting to maintain it by any such means. We are consequently left with the necessity of considering a surgical operation with a view to the correction of the abnormal condition. It is particularly important in this patient that the displacement should be relieved on account of the extensive laceration that exists in the cervix and the tendency there would necessarily be from its continued irritation to the development of malignant disease. The possibility of malignant disease arising in such conditions is no longer questioned; the fact that the disease in the uterus is often in the great majority of cases in the cervix, which is necessarily the site of any lesions following parturition, very strongly confirms the theories suggested as to the influence of this lesion in the development of malignant disease.

In this patient the condition is still more favorable to such degeneration, on account of the prolapsed state of the organ, its necessarily constant friction against the clothing of the patient or against her body, thus greatly increasing the irritation. What shall then be our course of treatment in such a patient? We may, very readily of course, overcome the dangers from the effect of the structure by repairing the cervix, freshening the edges and bringing the surface together by means of sutures. This would overcome the laceration of the surface, but often after it healed, we would have a very greatly elongated organ which would be prolapsed and give rise to a great deal of discomfort and inconvenience. So for this reason, in order to remove the irritation from its presence, I would suggest that an amputation of the cervix be made, pushing off the bladder from the anterior lip and dissecting up on the posterior lip nearly to the peritoneum, making flaps from the uterine mucous membrane, so that the formation of a non-contractile external os would be effected. This operation will remove the wedge-shaped surface from the vagina, which would greatly imperil any operation that might be done of a plastic character upon the vaginal walls, a condition which would sooner or later again develop the displacement of the uterus.

The first step, then, in the operation would be amputation of the cervix, and that high up. We will then retract the anterior wall of the vagina, which may be done by a variety of operative measures; thus, denuding a wedge-shaped surface, or a circular or oblong section, and affording opportunity to retract the vagina in different directions. In some cases the operation known as the circular denudation with purse string will be very effective. The retracted anterior wall must be supported by bringing the perineum up against it, which may be done by the Emmet operation, or in a case such as this, probably preferably by the operation recommended by Martin, which consists in taking out a section on either side of the posterior wall, bringing the edges of each denuded surface together by sutures, and then denuding and suturing the vulvar outlet. The difficulty in all operative procedures upon the vagina in these cases is the want of support of the upper third of the vagina. The result is, the uterus sags down upon the newly united surfaces, and acts as a wedge which favors still further the dilatation, and subsequently, after a length of time, makes its exit externally, leaving the patient in a more aggravated condition than before. This is particularly true of the denudation of the anterior wall of the vagina. If it does not unite readily, we have a push-

ing through the denudation of the bladder wall, covered with simply a thin layer of cicatricial tissue, which is so sensitive to pressure that it will not bear a pessary, and the condition of the patient is an exceedingly difficult one to subsequently relieve by any operative procedure.

If in this patient, we had, instead of the elongation of the cervix such as I show you, an entire prolapsus of the uterus, forming what is known as procidentia, with the uterus retroverted, in my judgment, the better plan of procedure would be to remove the entire organ, performing extirpation of the uterus when the vaginal walls might be closed, retracted laterally, and the tendency to prolapsus be very greatly lessened on account of the decreased weight at the upper portion of the canal. The operation would be an exceedingly easy one, as the vessels could be exposed and ligated without any danger of serious hæmorrhage. The plan of procedure, however, is not an applicable one to this case, for the reason that the fundus of the uterus is situated still high up. In a case of complete prolapse or procidentia of the uterus, in the Philadelphia Hospital some years ago, I performed what is known as the Le Fort operation, which consists in denuding a section upon the anterior wall about four-fifths of an inch in width the entire length of the wall, a similar one upon the posterior wall, and bringing these surfaces together by suturing the edges of the mucous membrane on either side in such a way that the raw snrfaces lie in apposition, forming consequently a septum dividing the vagina into two canals. The lower portion is strengthened by an operation on the perineum to narrow the vaginal outlet. This is a procedure which is extremely serviceable in those cases in which the climacteric is past and the woman is no longer in danger of becoming pregnant. It is, of course, as you would readily understand, an operation that might be attended with serious consequences in a woman during the child-bearing period, inasmuch as the existence of such a septum would necessarily greatly complicate delivery of the patient.

The patient upon whom I operated was seen two years afterward, when the uterus was found on the upper portion of the vagina, greatly atrophied, and the woman was able to resume her duties as a domestic without any inconvenience whatever. This patient I shall bring before you in a few days, if she is willing to consent to an operation, and will subject her to the operation we have just indicated.

PUERPERAL SEPTICÆMIA REQUIRING ABDOMINAL SECTION.

Three days ago, I operated upon a patient for a condition of so great interest that I feel that it would not be time lost to give you a history of the case and the plan of procedure. The woman was a patient of a gentleman engaged in a large practice in this city, and was delivered some four weeks ago of a still-born child which presented by the breech. The labor was quite difficult, was completed by instruments, and was followed in a few days by considerable elevation of temperature; the patient complained of pain over the abdomen, particularly in the right side, and there was not at any time any marked offensive odor. She was promptly placed upon vaginal irrigation and measures instituted to decrease the temperature. I saw her the sixth day after the delivery, when she had a temperature of 105.° We at once began the intra-uterine irrigation, and the use of salines, which resulted in decrease of temperature to nearly normal. This, however, within a few days again ascended, when she was placed under the influence of an anæsthetic and the cavity of the uterus carefully curetted with the finger, a large amount of débris and broken down membranes removed, the uterus irrigated with sublimate and afterwards peroxide of hydrogen, and then a rope of iodoform gauze carried to the fundus of the organ.

Her temperature the following day was below 100 and the second day, normal. The gauze was then withdrawn and intra-uterine irrigation again practised. Her temperature again began to increase, pain was more marked on the right side and we were finally driven by the indications of septic disease to the conclusion that it was necessary to resort to section of the abdomen with a view of removal of whatever might be the offending cause. We were inclined to believe that it would be the supra-vaginal removal of the uterus. In performing the operation, the patient was placed in the Trendelenburg position—that is, upon an inclining plane, the lower part of the body at an angle of forty-five degrees, so that the light from the window would fall directly into the pelvis. The abdomen was opened, and scarcely was the right wall lifted up until the discharge of the pus was observed. The intestines were hastily covered over with a cheese cloth towel, the pus sponged away, the opening effected and the abscess thus emptied.

Quite a large quantity of pus was removed from the abscess cavity, which was found to

consist of the right tube and ovary. These were enucleated, raised up, the pedicle ligated and their removal accomplished. In ligating the pedicle it tore off from the side of the uterus flush with it. As there was no pedicle, the bleeding from this was controlled by continuous catgut suture sewing the peritoneum over it. Bleeding was effectively controlled, the patient lowered, the cavity thoroughly irrigated and a drainage tube inserted.

Her temperature the following day ran up again to 103°, but under the influence of antipyretics it had fallen in the evening to nearly normal. Since that time her temperature has ranged from 95⅘° to 101°. Her condition in every respect is very greatly improved, and the chances for her recovery now seem to be quite favorable.

I recount this case as an illustration of what I have repeatedly told you in these lectures, of the importance of thoroughly clearing out the uterus early in septic cases to prevent the extension of inflammation to the tubes and ovaries, and in those cases in which there is indication of such extension, to use prompt measures to bring about the early removal of the secondary foci before the system of the patient is thoroughly poisoned.

COMMUNICATIONS.

A DISCUSSION ON PHAGOCYTOSIS AND IMMUNITY.*

At the Pathological Society of London, February 16th, 1892.

The President (Sir G. Murray Humphry) introduced the subject in a few words, in which he stated that the discussion was to show how the blood dealt with morbid material introduced into it. He then called upon Dr. Sims Woodhead, who delivered the following address:

II.—G SIMS WOODHEAD, M. D.
Director of the Research Laboratory of the Conjoint Board of the Royal College of Physicians and Surgeons.

Mr. President and Gentlemen:—I am sure we all have some little difficulty in approaching the questions that must be asked and satisfactorily answered before we can arrive at any definite conclusion as to the part that phagocytosis plays in the production of immunity against specific infective diseases. As in all great questions of this kind, the personality, energy, and ingenuity of the supporters of opposing theories have much to do with the temporary success of one or another system, though not with the ultimate result of any controversy. It is easy to prove anything to the credulous, but the proof of it to those who are neutral or who are absolutely incredulous is an entirely different matter, but certainly a much more satisfactory one; and I would here say there is no more satisfactory man to deal with than a friendly unbeliever. His objections stimulate our invention, and his candid criticism tests to the full not only our logical capacity but the soundness of our thesis. It is in that spirit of friendly unbelief, I hope, that we shall attack the arguments of those with whom we cannot agree; that we shall point out the errors of experiment, the faulty deductions, both direct and indirect, and that at the end of the discussion each one of us may carry away some additional facts, some new ideas, and the conviction that if some of our experiments are without flaw, others, interpreted in the light shed on the subject by other workers, may with advantage be repeated under various modified conditions and with the exclusion of any factors by which some of them at least may be rendered fallacious. It is impossible to discuss the relation of phagocytosis to immunity without introducing much concerning chemotaxis, and what has very aptly been spoken of as the humoral theory of immunity: the former of these is not antagonistic to, but may be actually looked upon as an essential part of, phagocytosis. The latter, however, is held as being in direct opposition to Metschnikoff's theory, though an attempt is now being made to combine the two; an attempt which, though up to the present unsuccessful, or, perhaps, one would say founded on little experimental basis, is gaining ground with those who, with the observations and deductions of the earlier investigators at their disposal, have taken up the matter. It would obviously be of no advantage that I should now attempt to make any suggestion even as to which theory—the "phagocyte" or the "humoral"—is supported by the bulk of evidence; though it will be gathered from the short summary here given of the work that has already been done that I lean to the theory of phagocytosis. Although Metschnikoff and Buchner may be looked upon as the present leaders in the two camps, a considerable amount of work preceded their scientific generalisms, and numerous observers are now engaged in testing the accuracy of their observations and deductions, and by improved methods are confirming or disproving the value of the earlier experiments.

From *Brit. Med. Jour.*

Taking first the question of phagocytosis from its physiological standpoint, and quite apart from its bearing on immunity, it has long been recognized that inert particles finding their way into the animal system, or even introduced into the blood immediately after it has been drawn from the body of the newt, say, are rapidly taken up by leucocytes, and, in the body, from them, by the connective or other fixed tissue cells. A similar process has been observed by every pathologist who has examined a healing wound, a section of the lung, or the cells of a normal spleen. The significance of this process was first pointed out by Haeckel, who, comparing the leucocyte of the newt with those of the lower amœboid organisms, indicated that this must be the remaining evidence of a normal process of nutrition common to amœboid cells in whatever position they may exist; these cells, taking the vermilion or carbon particles, merely affording a better demonstration of what is always going on in most amœboid cells.

Then came the observation that the vacuoles in leucocytes appear to be associated with the digestive and metabolic processes, partly as reservoirs for the accumulation of a digestive fluid, but more frequently for the accumulation of effete products.

ROSER'S EARLY OBSERVATION.

Attention was first drawn in 1881 to the part played by phagocytic cells in the production of immunity by Carl Roser, who, in an exceedingly interesting article, gave examples of the possession of this phagocytic power by the cell of both plants and animals, and of its importance in the resistance by them to the attack of the pathogenic fungi by which they are sometimes invaded. He maintained that the mobile amœboid cells of the animal body have the power of incepting, digesting, and assimilating even those living active micro-organisms which in non-resistant or non-immune animals have the power of withstanding the attacks of the devouring cells, and of continuing their existence and carrying on their specific functions in the tissues and fluids, where, as he found, they give rise to their characteristic products and set up the special manifestations of the disease with which they are associated; and he maintained that, as the result of his observations, he was convinced that this power of taking up such micro-organism must be an essential factor in the immunity enjoyed by non-susceptible animals. It was at this point that Metschnikoff—to whose patient researches, fertile and ingenious experiment, and brilliant powers of deduction we owe much of our knowledge of phagocytosis—took up the question, and, approaching it entirely from the experimental and biological sides, was able to build up, first, a theory of phagocytosis, and then of phagocytic immunity.

METSCHNIKOFF'S RESEARCHES.

He confirmed Haeckel's observations, and further demonstrated the fact that certain amœbæ and flagellated or ciliated unicellular organisms in the normal condition depend for much of their nourishment upon bacteria and fungi, which they destroy in large numbers, taking them into the substance of their protoplasm, extracting from them all nutritive substance, and then throwing out such matter as they cannot utilize. One of these small monads was observed to take into its substance within a few minutes filaments of leptothrix ten times its own length. This observation is one of prime importance, but one which we are apt to lose sight of in view of the apparently more interesting questions that have arisen in connection with the destruction of pathogenic organisms. Here we have unicellular animal organisms composed of imperfectly differentiated protoplasm, utilizing as nutritive material vegetable unicellular organisms, taking them into their substance and rejecting what they do not require.

It can scarcely be maintained for a moment that these leptothrix filaments are deprived of their vitality before they are incepted by the amœbæ, and we must therefore accept it as proved that these masses of elementary animal protoplasm can deal with living vegetable protoplasm as a nutritive material, the process of digestion going on within the cells, which do not act merely in self-defence in taking up these lower bacteria or fungi, but are actually dependent upon the process of ingestion and digestion for their nutrition.

It is not necessary here to multiply examples of this process, as Metschnikoff's elaborate researches on this point, quite apart from the many who have followed in his footsteps, place the matter beyond all doubt. Here then is the first fact—that these amœboid cells retain their activity and their functions, whilst the vegetable cells which they ingest are completely destroyed. Going a step further, Metschnikoff demonstrated that one of the layers of special differentiated cellular tissue met with in sponges, the mesoderm cells of which the animal is in great part composed, may still retain this power of ingesting foreign particles, each cell in this mesoderm layer playing the part of a

single amœboid protozoa, and he showed that they depend for their nutrition upon this intra-cellular digestion.

PHYSIOLOGICAL PHAGOCYTOSIS.

Phagocytosis in these cases, then, is not, as I have elsewhere stated, an isolated factor or a function brought into play for a solitary or rare occasion, but it is a habit upon which the animal cell depends for its very existence. This fact is more important when we bear in mind that any "fundamental" function of undifferentiated protoplasm is comparatively easily stimulated into activity when its presence is again required. It is a fact upon which the very foundation of the phagocytic theory depends.

Some time ago, whilst watching the development of the ova of the cod with Brook, of Edinburgh, the process of intra-cellular digestion was pointed out to me as occurring at certain stages in the whole of the cells of which the embryo is composed, small particles of yolk substance being taken into the actively proliferating cells and clear vesicles, which we can look upon as playing the excretory function, making their appearance. Later, however, where the cells are becoming differentiated, the intracellular digestion is confined almost entirely to the mesoderm cells; if we examine the parablast layer, the process of intracellular digestion is exceedingly well marked, the granules of yolk and the vacuoles standing out very prominently.

All will accept it as proved that in the metamorphoses of the tadpole, and of certain larval forms of insects, into fully developed forms, phagocytosis plays a most important part; but here it must be remembered that we are dealing with dead or partially devitalized tissues—tissues which have played their part, and are now to be looked upon as effete matter, and therefore not to be classed under the same heading as living active bacteria. Degenerating muscles, nerves, and fascia are devoured by active amœboid cells, and in this way the rapid removal of effete material is effected, an enormous number of phagocytes congregating to carry on the work at those points at which organs or parts are to be got rid of.

By a very natural extension, the part that this process of phagocytosis plays in the removal of dead or effete tissue after injury or disease has been also traced, the destruction of the myeline sheath of nerve fibres by amœboid cells, the absorption of bone by the large multi-nucleated cells that lie in Howship's foveolæ or lacunæ, the similar cells observed in myeloid sarcoma, especially in various tumors of the jaw, where absorption of the bone is going on rapidly, the inception of fragments of yellow elastic fibre and the absorption of muscle, not only in the tadpole's tail, as observed by Metschnikoff and others, but also in the inflammatory process set up by the trichina spiralis, as worked out so beautifully by Soudakewitch and in the involuting uterus by Helme, and others have all been followed out. Bevan Lewis has also shown that the connective tissue cells in the brain appear to exert a similar function in the removal of effete nerve structures, a most important point when considered along with the "associated fibres" and the part that they play in intellectual processes.

THE SOURCE OF MACROPHAGES AND MICROPHAGES.

Although in the first instance much stress was laid upon the leucocyte Metschnikoff, even in his earlier papers, and later Wyssokowicz, evidently had in view the fact that many of the cells were not true leucocytes, but that they were derived in some way or other from the fixed tissue cells, which appeared to undergo marked change under stimulation; they proliferate rapidly, they lose their specialized forms, their branching processes disappearing and the nucleus occupying a relatively large portion of the body of the cell; this nucleus as a rule remains single, but in all other respects these cells approach very nearly to the ordinary leucocyte, especially as they assume the specialized amœboid activity said to be so characteristic of the small cells. The single nucleated macrophages as distinguished from the small multi-nucleated microphages or leucocytes must indeed be looked upon as the final phagocytes, though, as we shall afterwards see they appear to have less marked powers of taking up living protoplasm than the leucocytes themselves, which in all essential respects approach much more nearly the primitive amœboid cells of the mesoderm cells of the sponge than do the large macrophages. The nearer the microphage under stimulation approaches the macrophage the more aggressive does it become and the less is it content to take up simply effete matter.

Even under normal conditions then these mesoderm cells, according to Metschnikoff, have as one of their functions the inception of all those solid parts of the organism that have became effete or useless, and where they are unable to carry out this function as individuals it would seem that they may combine in order to attack with greater certainty of success. As examples of this in the inverte-

brate kingdom, Metschnikoff points out that the mesoderm cell in the sponge may form a kind of network around bundles of leptothrix, gradually bringing about its destruction. In the same way it has been pointed out by Geddes that particles of organic or other matter, when introduced into the abdominal cavities of certain of the echinoderms, may, if small, be taken up by single cells, but where larger masses have to be dealt with a considerable number of such cells appear to run together, the protoplasm becoming fused into a large plasmodial mass, in which the individual nuclei of the original cells can scarcely be seen. Elsewhere I have indicated the part that myeloid or giant cells play in the absorption of bone and muscle and also in the parablasts of the ovum of certain fishes. In this latter case, however, the multinucleated cells, in place of being formed by single nucleated cells, running together, are the result of partial segmentation, the nuclei dividing but the protoplasm remaining as a single mass.

All this, however, has not led us beyond the point that amœboid cells in the higher animal organisms have the power, or rather the function, of removing innocuous material —organic or inorganic—or at any rate material that has, in the quantities in which it is usually present in the organism, no deleterious effects on the phacocyte cells. This is a perfectly different function from the phagocytic function that is exerted by the single-celled amœbæ or by the mesoderm cell of the lower invertebrate, which actually attack living organisms and depend on this power in a very large degree for their nutriment. We can readily understand how, in the process of development, where this attacking power is to a certain extent lost, as it is no longer necessary for the nutrition of the organism, the scavenging power may still remain in order to get rid in the most economical fashion possible of dead or inert foreign particles of chemical products and of effete materials of various kinds. Although this attacking power has in great measure been lost through disuse, it must still be remembered that it remains as one of the potential faculties of the primitive protoplasm, and that under suitable conditions it may again be brought into play; and, as Metschnikoff holds (and this is the key to his whole position), under certain conditions of stimulation the scavenging phagocytes may regain their original attacking function to such an extent that they may not only remove dead tissue and innocuous micro-organisms, but they may actually attack, ingest, and destroy micro-organisms to which, under ordinary circumstances, they would exhibit the greatest aversion, or, if these are brought into contact with them, to which they would succumb. We have here stimulation, but, as will be pointed out later, it is a special stimulation, and a stimulation that must be commenced gently and carried on for some time, increasing gradually, so that we may say there is a gradual preparation of acclimatization of the leucocytes before they can contend at all successfully with pathogenic micro-organisms, and before they can regain their phagocytic functions from the nutritive point of view, a function that may become so marked that the secondary or scavenging function is relegated to a comparatively unimportant condition.

TISSUE RESISTANCE AND TISSUE CELLS.

Tissue resistance, which may be translated as the power of reaction of cells, is necessarily intimately bound up with their life-history, with their powers of nutrition, with the facilities that they have for the excretion of effete matter, their power of taking up foreign bodies (such as pigment, bacteria, and the rest), and with their capacity for converting these into inert matter, and afterwards for utilizing them for their own purposes, and of getting rid of them. Even the physical surroundings of the cells, and, as we see, the reaction of certain chemicals on the protoplasm of the cells may interfere very greatly with some of these functions, and W. Pfeffer, in his careful observations on the action of aniline colors on vegetable cells, has pointed out what a great part the osmotic condition plays in inducing the absorption and retention not only of coloring matter held in solution, but also of solid particles brought in contact with the cells. He found, for instance, that on placing the cells of root hairs (and other vegetable cells easily examined) in a solution of 3 per cent. of saltpetre or of citric or malic acid, methylene blue, which under ordinary circumstances is taken up with great avidity by the protoplasm of these cells, is utterly rejected. The same appears to hold good in the case of solid particles. So far as one can make out from a careful study of the different results obtained by different experimenters, some such conditions as these have also played a part in determining the inception or rejection of living bacteria by the phagocytes.

It is not here necessary to repeat Metschnikoff's original experiment made on the water flea—the daphnia—with the monsopora dicuspidata—a form of single-celled yeast plant—but I would advise all who have not

read his interesting paper to make themselves thoroughly acquainted with the most fascinating account that he gives of the behavior of the needle-like spores of this parasitic yeast in the body cavity or in the tissues surrounding the intestine of its host. He shows how the small spore is taken up by the colorless blood corpuscles or by the connective-tissue corpuscles where the spore succumbs, and how it is developed into red-shaped vegetative form where these phagocytes, owing to weakness or number, are unable to deal with them. Upon this observation Metschnikoff's phagocytic theory of immunity was based, and it led to a series of the most ingenious and well thought out experiments that we have had since Pasteur's classical experiments in connection with fermentation and the production of disease.

I have pointed out elsewhere that erysipelas has been taken by the opponents of the theory of phagocytosis as an example which supports their contention that phagocytes play only a secondary part, and that entirely a scavenging part, in the process. They point out truly enough that the streptococci in erysipelas are outside the zone in which the leucocytes are collecting, and that there is little or no evidence of inflammatory reaction for some time after micro-organisms have made their appearance in the lymph spaces. They say, therefore, that if the cells in the inflammatory zone play any part at all it is only that of incepting the micro-organisms that have been destroyed by the fluid elements of the lymph or blood. But it may be here observed—to use a homely phrase—that what it "sauce for the goose ought to be sauce for the gander," and that we have no more evidence of destruction by the fluid elements in the spreading erysipelatous zone than we have of their destruction by the leucocytes; whilst we have evidence that as soon as the tissues are stimulated to react in the zone outside the proliferating micrococci, the conditions under which the cells can carry on their phagocytic functions become more favorable, with the result that the disease is localized. But of this I leave others who have worked at the subject to speak for themselves.

Let us see on what Metschnikoff depends for the proof of his theory of phagocytosis, and at the outset we may indicate that he draws a marked distinction between leucocytes and those cells derived from connective tissue—a distinction, however, which does not seem to hold good in all cases, as it is evident from what we know of the life-history of cells that extremely rapid proliferation of the connective tissue cells may take place under stimulation. Metschnikoff, indeed, indicated very early that many of the processes connected with the removal of the tadpole's tail were carried on by the larger fixed cells—a fact that was afterwards accentuated by Wyssokowitscky, and again by Helme in connection with the absorption of muscular fibre, by Metschnikoff himself, and by Soudakewitch. However, we will take the leucocytes as representing the phagocyte cells, and anthrax—a disease with which most work has been done—as the typical disease. In immune animals anthrax bacilli, which may be deeply stained with vesuvin or methyl blue, are invariably found within these cells, not only at the point of inoculation, but also in the blood. It has been stated that this coloring of the bacilli by aniline colors is no proof that the organisms were not killed before they were taken into the substance of the cell—a perfectly legitimate criticism, as we know that bacteria killed by heat, by chloride of mercury, or by absolute alcohol will readily take up the various staining reagents. It has been proved by Mitchell Prudden and Hodenpyl, that tubercle bacilli killed by being boiled for two hours and then injected into the circulation of an animal still take up aniline stains, and may often be seen as brilliantly stained rods lying in the tissue spaces, and in some cases actually within the cells, six weeks after injection.

THE ACTION OF PHAGOCYTES ON BACILLI.

This at first sight would appear an almost insuperable difficulty, but Metschnikoff overcame it by showing that bacilli in the leucocytes taken from immune animals still retain their power of vegetative reproduction by the following experiment. He placed some of these leucocytes containing bacilli on a warm stage under the microscope and by most delicate manipulative measures he was able to isolate three cells, each of them containing anthrax bacilli; each of these cells was taken up in a sterilized capillary tube, was then transferred to nutrient bouillon, and was watched under the microscope, the bacteria were seen to develop in length, and then when these were transferred to larger quantities of nutrient medium, a pure culture of the organism was obtained. Further, he has demonstrated that in immune animals the process of digestion goes on first in the leucocytes or microphages, but that afterwards not only microphages with their contents, but also other bacilli are taken up by macrophages, which appear to be derived rather from local fixed cells, though some of course may come from a distance.

Another proof that the micro-organisms are alive and probably active is found in the fact that although in most cells bacteria are undergoing degenerative changes they do not take on staining material at all readily, their protoplasm is becoming granular, or a great part of it has become absorbed, nuclei of the incepting cells still remaining distinct and deeply stained, vacuoles associated with rapid metabolic changes also being present; in some cases the cells are being actually broken down whilst many of the bacteria within them are as perfectly stained as are those taken from a young pure culture. This appears to be the case especially where a large number of bacteria are contained within each cell and where it would appear that the protoplasm of the cell has become exhausted through over-stimulation, and where in consequence the bacteria have gained the upper hand.

Frank, as the result of his experiments on white rats, in which he was able to obtain the death of one only out of twenty-two, although all the others had local anthrax lesions, maintained that the bacilli were killed *in situ* by the bacteria-killing serum which passed through the spaces in which the bacteria were confined. He says, however, that although they were localized first by the density of the tissues in this region, and secondly by an accumulation of leucocytes around them, in none of these leucocytes was he able to demonstrate the presence of anthrax bacilli. Metschnikoff, on the other hand, working under similar conditions, found that in the cells that accumulated in this part it was a comparatively easy matter by means of the use of special staining reagents, such as methylene blue, to determine the presence of bacteria in these cells, which he therefore holds are true phagocytes, and he further argues that Frank's experiments, in place of being contradictory, bear out his theory in a most remarkable manner.

CHEMOTAXIS.

It has for long been known that certain lower organisms exhibit a certain liking for certain substances, whilst for others they have an instinctive aversion, and from what has been observed it would appear that they are specially attracted to nutrient materials (trophotaxis). They maintain a marked indifference as regards substances from which there is nothing either to gain or to fear, whilst for other substances, most of which seem to exert some paralyzing or other deleterious effect on the cell, they evince the greatest dislike. Gabritchevsky, in summarizing this chemotactic action of leucocytes, gives a very good account of what has already been done (Adami gives a short abstract of this paper in the first part of his communication on immunity which appears in the *Manchester Medical Journal*). De Bary observes that in myxomycetes there were certain solid substances which, when brought near the plasmodium, exerted a vigorous repellent effect, the plasmodium in the first instance getting out of its way as rapidly as possible. If, however, these substances, with definite chemical characters, were introduced sufficiently gradually, the organisms would, after a time, become habituated to their presence, and would then actually take them up into their protoplasm. Metschnikoff, going out from his observations, had already conceived the idea that the acquired immunity against certain diseases might be due to a similar process of acclimatization of the cells, so that they are enabled to carry on their phagocytic functions in the presence of what, under ordinary conditions, would not allow them to come into sufficiently close contact to permit of their ingesting the microbes. This process of acclimatization can undoubtedly be brought about if the conditions be modified gradually and slowly, and it is now well known that cells, which at first would be quite unable to react in the presence of a specific poison, may ultimately be able to withstand large doses of it, and exert their special phagocytic function in its presence.

We have now numerous examples of the fact that if doses of poisons, produced by a specific bacillus, paralyze the amœboid cells, these same cells may by careful preparation, by the administration of repeated—at first small but gradually increasing—doses of the same poison, be so habituated to its presence that, after a time, the paralyzing effect is no longer excited, and the phagocytes are able to treat pathogenic organisms as comparatively inert foreign bodies, and the disease is kept under by the destruction of these organisms by the phagocytic cells. The organisms may remain in the body for some time, they may reproduce their poison, but the prepared cells are now able to carry on the scavenging functions even under these disadvantageous conditions, and in time the whole of the bacilli are taken into the cells, and, being unable to reproduce at any great rate, are gradually destroyed.

ANTIBIOTIC SUBSTANCES.

In marked opposition to Metschnikoff's phagocytosis theory, it was early brought

forward by Emmerich and Mattei that the property of destroying bacteria rested in the fluid constituents of the blood. They first maintained that these *antibiotic* fluid constituents were the result of the activity of the bacteria themselves; in fact, they took up the retention theory. After further observation, however, they receded from this position, and came to the conclusion that the *antibiotic* substances were formed by the living cellular elements. Following them, Flügge, Nuttall, and Nissen, who were afterwards joined by Buchner and others, described a bacteria-killing substance which was present in the blood of immune animals not only while it was circulating in the vessels, but also after it was withdrawn and had practically undergone coagulation, the serum being separated from the corpuscles—in which condition the blood might be said to have lost all traces of vitality. They hold, therefore, that a certain quantity of a toxic material, which apparently has little or nothing to do with the blood as a living tissue or fluid of the body, (in this differing from von Fódór's original idea, which was that there existed in the blood plasma a vital element which killed off the micro-organism). Following this up, Buchner maintains that the cause of recovery from an attack of an infective disease is directly due to a bacteria-killing action of the serum, and he further holds that phagocytosis is brought about merely by the dead microbes giving up their proteins, which, acting chemically in a positive manner, draw the leucocytes to the point at which the organisms are breaking down; here the leucocytes take them up and ultimately digest and get rid of them, so that he looks upon phagocytosis merely as the result, first, of chemotaxis and, secondly, of an effort on the part of the organism to get rid of the devitalized microbes. He admits that phagocytosis occurs only in those cases in which an effort is made on the part of the organism towards recovery, and that it is present only where an animal enjoys a certain immunity.

POSITIVE AND NEGATIVE CHEMOTAXIS.

Buchner holds that phagocytosis is entirely the result of positive chemotaxis, which in turn, so far as micro-organisms are concerned, can only be influenced by their proteids. The specific toxines can have little or no influence on the process. In support of this position he points out that Roux and Metschnikoff, both of whom believe thoroughly in the importance of the *rôle* played by the phagocytosis in the production of immunity, appear to hold different views as to the chemotactic action of these toxines on leucocytes—Roux indicating that they have a positive action; Metschnikoff, on the other hand, leaning to the opinion that they are negatively chemotactic, and that they repel the leucocytes. This, however, does not appear to be an insuperable difficulty, for we have ample evidence from numerous experiments that have been carried on that the same substances in different strengths of solution and under different conditions may exert very different chemotactic actions; and where one strength of solution may actually repel leucocytes, a more dilute solution may cause attraction. In this connection we shall probably have the pleasure of seeing some of Dr. Ruffer's specimens, in which may be well seen the effects of antiseptics, in different strengths, on leucocytes. I need not repeat to this Society Lister's classical experiments on the effect of heat on the movement of the cilia of a cell; but I may be allowed to notice that Schultz was able to show that the ferment power of yeast is distinctly increased by the addition of extremely dilute solutions of corrosive sublimate, arsenic, carbolic acid, and iodine, all of which in stronger solutions exert a very deleterious effect upon the protoplasm of the cells; he states his conclusion in the following words: "Every irritant exerts an action on every living cell in which the effect in relation to cell activity is inversely proportional to its intensity."

In order to overcome the objection of those who maintained that the organisms are killed by the fluids of the blood, and not by the cells, he took small boxes made of rose pith or of the pith of the common reed (phragmites communis), placed within them the spores of pathogenic organisms, and then introduced these into the veins, into the lymph sacs of the frog, or into little pockets under the skin of immune animals. The pith, for a time acting as a filter, kept out the cellular elements, and kept in the anthrax bacilli, but allowed free circulation of fluid through its interstices. He found that not only were the organisms not injured by the fluid, but they were actually enabled to vegetate and increase—in some cases very rapidly—in numbers.

Ruffer, who will probably give you the result of his own experiments, confirmed these observations, and pointed out further that the passage of generations of certain pathogenic organisms through the fluids of the body actually rendered them considerably more virulent—a result for which we had been prepared by Metschnikoff's experiments

on the increase of virulence of anthrax bacillus passed through pigeons.

BEHAVIOR OF LEUCOCYTES OF IMMUNE ANIMALS TO TOXINES.

Roux and Metschnikoff consider that leucocytes may become accustomed to the presence of considerable quantities of toxines in those cases where there is acquired immunity, and this appears to be undoubtedly the case in many diseases. In favor of the humoral theory, the single doubtful case of the vibrio Metschnikovi can be brought forward, for here it has been shown that even a guinea-pig immune to the subcutaneous injection of the organism still remains remarkably susceptible to the action of the toxines, though even here it is maintained that if the habituation be brought about extremely gradually, the immunity extends also to the poisons. In this case, it is supposed that we have stronger evidence of the correctness of the humoral theory than in any other disease, as it is maintained by Behring and Nissen that the serum from susceptible guinea-pigs affords a favorable medium to the growth of this organism, whilst that of immune animals kills them in five hours; but, on the other hand, Metschnikoff has pointed out that the vibrio Metschnikovi will grow in its normal form in the fluids of an immune animal, although when the same organism is cultivated in similar fluids removed from the body, involution forms are frequently met with. Here then we have a marked difference in the behavior of the organism in the living medium and in the dead. It is evident, in this case, that the fluids must have undergone some marked change on leaving the body, especially when we bear in mind that the organism remains alive for at least a fortnight when introduced into the anterior chamber of the eye of an immune guinea-pig. Roger made a similar observation as regards the streptococcus growing in the serum of immune rabbits, the organism growing freely but becoming attenuated. Roger and Charrin noted the same in connection with the bacillus pyocyaneus.

It must be borne in mind, however, that even Metschnikoff does not claim that phagocytosis is the only factor in the production of immunity. He claims merely that in immune animals it undoubtedly plays an important part, as here through the agency of the leucocytes and the proliferating connective tissue cells, living pathogenic bacteria are removed from the circulation; they are prevented from germinating, and thus the number of organisms is gradually diminished. He maintains, moreover, that it is by this process of phagocytosis that diseases are localized, and that from the very fact that we have a local reaction in immune animals we have an indication that the phagocytes are reacting to prevent the spread of the organism beyond the point of its introduction, and that thus we have, as it were, a first line of defence which must be passed before the disease can become generalized; and that in the endothelial cells of the spleen, of the blood vessels, and especially of the capillary blood vessels of organs in which there is very free capillary anastomosis and slow circulation, we have what may be called a second line of defence, and that when this is broken down the animal must succumb to a generalized disease.

In a short article on the recent researches on immunity, Adami suggests that there may be an increase in the bacteria-killing power of the blood plasma through the dissolution of a number of the white corpuscles. It is well-known that the breaking down of such corpuscles sets free materials which induce positive chemotaxis, and stimulates into greater phagocytic activity those cells which remain intact. In this case there appears to be some doubt as to the increased bactericidal power as the result of the setting free of the elements of the leucocytes. Working at this from one point of view, Wright has been able to demonstrate that anthrax bacilli may actually be cultivated on the broken-down leucocytes; further, it has frequently been demonstrated that quinine in large doses exerts a very marked action in destroying leucocytes in the animal body, and for that reason it was anticipated that to this action quinine owed the beneficial results obtained from its use in certain specific fevers.

Wood and I, trying this drug in cases of anthrax, found that in every case the animals treated with quinine died more rapidly than the controls—a most remarkable fact, and one which, along with the other observation, appears to negative Adami's suggestion as to the setting free of bactericidal material from dead leucocytes. Were it proved, however, we might, from our experiments make the very important deduction that the cells in a living condition exert a greater protective influence than they do when dead and broken-down, as even the control animal, in which the quinine has not been present to help to break down the leucocytes, lives longer than that in which the bactericidal power of the fluid is supposed to be increased by the diffusion into it of the elements of the broken down blood corpuscles. This is the more re-

markable when we find that almost all those who believe in the bactericidal power of blood serum assign to it a much greater efficacy after it is withdrawn from the body than when it is left circulating in the vessels. They assume that it has a much greater bactericidal power, so that this power must, to a certain extent, be inhibited within the body. Even here again we are met by a difficulty as a large proportion of leucocytes remain active after they are removed from the body; in fact the changes in them appear rather to be secondary to changes in the condition in the blood plasma.

Lubarsch believes with Flügge that the bacteria-destroying power of serum is exhausted by use, and that if the number of micro-organisms introduced is larger than that with which they can deal the animal must succumb. Metschnikoff, however, has been able, in certain partially immune animals, to demonstrate the presence of living bacteria four days after their first introduction. This would indicate that in cases which recover these organisms had, as it were, been waiting their turn to be killed off, the supply of poison not being equal to the demand, or on the other hand, we must assume that there is here a condition of almost perfect physiological equilibrium, those organisms that are not destroyed being just able to produce a few more than the next batch of poison can deal with, so that, unless some other element comes in, such as increased production of poison or the calling in of the phagocytes to help in the work of destruction, the production of bacteria might go on indefinitely.

IMMUNITY PRODUCED BY VARYING PROCESSES.

One of the great mistakes that has been made, and is still made by many, is that it is assumed that immunity against different diseases may be obtained or acquired in the same way. It is evident that the processes by which immunity can be obtained must vary as widely as do the processes of disease themselves. As Lubarsch points out, tetanus and diphtheria are as different from anthrax as possible. The primary mechanism of the diseases are absolutely unlike, while the same may be said as regards typhoid and tuberculosis. Tetanus and diphtheria must be looked upon as toxæmias or septicæmias, using this term in the sense in which it was used some few years ago. The organisms which produce the poison are strictly localized to a very definite area around the point of introduction, but they form poisonous substances which, taken into the circulation, give rise to marked disturbances and degenerations, especially of the highly organized tissues, such as the nerves, muscles, and excreting epithelium. One can understand what an injurious effect such poisonous material must have on the tissue cells, and even on the leucocytes, at the point where the poison is introduced, especially if these poisons are introduced at once in a virulent form; the cells are paralyzed, they are at once attacked by the organisms, and form a nutrient substratum on which they can grow. If, however, the cells can be habituated to the presence of small doses of poison it is quite conceivable that eventually we might produce an immunity, from the fact that we had acclimatized the animal to larger doses of the poison than it could secrete when introduced; and that, therefore, the cells would be able to carry on their destructive functions, and thus get rid of the organisms before they could do any harm. As a matter of fact, it has been shown that the tetanus organism, unless accompanied by a considerable quantity of its specific poison, is absolutely unable to flourish in the healthy tissues, so that in this case, at any rate, the immunity has to be acquired against the action of a poison formed by the bacillus, and diffused into the body, rather than against the growth of the bacillus itself.

The same holds good to a certain extent in the case of diphtheria, the conditions necessary for infection by this organism appearing to be either (1) inflammations of the mucous membrane, accumulation of secretions, formation of ulcers and similar conditions, or (2) the introduction of a considerable mass of the organism, accompanied by a quantity of the specific poison. In both cases it is probable that we may actually find that in the process of rendering the animal immune we may actually set up the degenerative changes so characteristic of diphtheria.

It is probable that similar changes may be found in animals that have been protected against tetanus. Probably some of those taking part in this discussion Dr. Sidney Martin, Dr. Hunter, and others, will have something to say on this point. In the case of anthrax it is necessary to produce an immunity which (1) will localize the disease at the point of introduction, or (2) which will enable the tissues to act on the organism at once, probably in the first case through the leucocytes, for we can scarcely imagine that a sufficient quantity of the fluid elements of the blood can be brought up to attack a large number of organisms when the blood of the whole body, according to Lubarsch, can determine the destruction of only 10,000

anthrax bacilli. Even a very high degree of alteration in its bactericidal power would scarcely enable it to deal with the large numbers that may be introduced locally. Only some such factor as the bringing up of large numbers of leucocytes, which, owing to a natural or acquired immunity, are enabled to act in the presence of anthrax poison, can bring about, first a localization of the anthrax bacilli by the erection of a cellular barrier, and secondly, their destruction by a process of ingestion and digestion.

In all our researches on immunity we are confronted with the question, How is it that immunity is conferred for one disease only, or certainly for one series only? Why should an attack of vaccinia or variola be necessary to ensure protection against another attack of variola? The exhaustion of assimilation theory was early found insufficient to account for it, as it was also to explain the different action of the bacillus prodigiosus, which, whilst diminishing the action of a dose of anthrax, increases the virulence of Chauveau's bacillus or charbon symptomatique. The local immunity theory in the same way was found insufficient, and local inflammation as a factor in immunity has also had its day, perhaps, however, to be revived at no distant date. The adaptation theory or cellular chemical theory advocated by Klebs and Grawitz, Ribbert's theory of massing of leucocytes, and Metschnikoff's phagocyte theory have in turn ousted the retention theory advocated by Wernich and Chauveau, whilst the serum bactericidal theory has come forward to rout this if possible. It may be that we may have to cull something from each of several of these various hypotheses, but we must always bear in mind that the potential forms and functions of animal protoplasm are as great as the number of directions in which it actually develops. Its property of resistance to any special poison, or its power of carrying on its functions in the presence of such poison, can always be brought about by exercise. It falls into abeyance again, no doubt, when not required, but once revived it is far more readily again brought into play when again called upon. Each poison it is held develops or recalls a special resistance, and it is in the rapid development of this special resistance that immunity consists.

Even should the bactericidal power of serum be proved to exist, it must depend directly upon changes produced in the cells, changes which must be equally specific if what we think we know about immunity is at all to be trusted. Immunity is specific, whilst this bactericidal power of serum is very general in its action unless we accept it that the blood must be loaded with a fresh bacteria-killing material for every disease we contract from childhood upwards, beginning with whooping-cough and measles, and passing through the whole gamut of the ills that flesh is heir to.

II.—J. BURDON SANDERSON, M. D., D. C. L., LL. D., F. R. S.

Waynflete Professor of Physiology in the University of Oxford.

Dr. Burdon Sanderson stated very briefly the general grounds for not accepting the doctrine of phagocytosis. The specific power enjoyed by the organism of protecting itself against the exciting causes of specific diseases was, he said, admitted by all pathologists. It was also admitted that the intervention of leucocytes is associated in many instances with the successful exercise of this power by the organism. In these instances the action of leucocytes is recognized as beneficial, but many pathologists decline to vest in them protective power or to recognize any direct relation between their activity and the specific exciting causes of specific diseases; and attribute the phenomena of phagocytosis to the ordinary endowments which leucocytes manifest, not merely in disease, but under normal physiological conditions, such for example, as those under which they act in the processes by which effete structures are absorbed. Unless it can be shown that this is not the case, there is no reason for assuming the existence of those special endowments by which, according to the theory of phagocytosis, they are enabled to act independently of the organism for its protection.

III.—E. KLEIN, M. D., F.R.S.,

Lecturer on General Anatomy, etc., St. Bartholomew's Hospital.

Dr. Klein admitted his inability to accept the argument advanced by the supporters of the phagocyte theory, and in support of his position he stated that the question of phagocytosis embraced a very much wider field of observation that was included in the views already advanced. Some investigators included all instances in which bacteria were found engulfed in cells. This, he contended, was the first error, and illustrated his remark by exhibiting a number of photomicrographs showing a dozen instances of micro-organisms contained in cells which were breaking down under their influence, thus reversing the process described. He

said, that the influence of chemotaxis, as shown in the cells of bileducts in which psorosperms were growing, was of quite a different nature to that asserted, In the many cases of immunity in which inoculation was not followed by disease, were the bacilli killed by leucocytes, by some other agent, or by the two in combination? He referred to the experiment of Emmerick and Mattei in which it was shown that the micrococcus of swine erysipelas which would kill a rabbit when injected subcutaneously, did not do so when introduced into the circulation, and further, that an animal so treated acquired immunity from infection by some subsequent inoculation, and that phagocytes cannot then be found at its site. Reference was made also to the observation of Metschnikoff that after forty-eight hours living bacilli can still be found in the blood of an immune animal; but it was stated that in such cases there was not a commensurate number of cells containing the micro-organisms. In the dog, cat, and rat, which were insusceptible, it was extremely difficult to find any adequate number of baccillus-bearing cells after inoculation. In the next place, he would ask if there were any well-established cases in which bacilli were known to have been destroyed by lymph or other juices; and here he alluded to experiments being carried out by Dr. Fred. Andrewes, and which showed that pus, already dead, and even when twenty-four hours out of the body, had a rapidly noxious effect upon these organisms. When anthrax was introduced into the dorsal lymph sac of a frog, it was hours before any bacilli were seen inclosed in cells, the lymph itself being capable of destroying them.

Professor Klein then gave an account of some experiments in which it was found that a rapid diminution in bacilli occurred within two hours of introduction into the body, which was not at all in accord with the time observed in their gradual approach and engulfment by cells. He thought it was much simpler to assume that the juices of the body were germicidal, though Buchner's explanation gave little account of what took place with regard to the bacilli after they were weakened by exposure to them, as to whether they were then taken up and carried away by cells acting as scavengers. That important part of the cell's duty had yet to be proved.

IV.—A. A. KANTHACK, F. R. C. S.,

John Lucas Walker Student in Pathology, Cambridge University.

Taking phagocytosis in connection with immunity to mean the ingestion and destruction of living micro-organisms by certain wandering or fixed cells of the body, I assume that, at the present date, no doubt exists as to the occurrence of such a phenomenon. Phagocytosis is almost consistently observed in cases where an animal recovers after being inoculated with a pathogenic germ, or where an animal, artificially or naturally immune, is inoculated in the same manner. It has been claimed that phagocytosis is the chief, if not the only, factor in the acquisition of immunity.

I would abstain from alluding to the origin and nature of the phagocytes, were it not that Dr. Ruffer—as far as I can follow him—asserts that all phagocytes, including microphages and macrophages, plasmic and epithelioid cells, are derived from leucocytes. On the contrary, there can be no doubt that the plasmic and epithelioid cells, observed during inflammation and regeneration, are derived from the fixed connective tissue cells *in situ*. This has been shown by the researches of Grawitz, Ziegler, Nikiforoff, Bardenheuer, and also by Messrs. Ballance and Sherrington. Personally, I have on several occasions repeated the experiments of Grawitz and Bardenheuer, and cannot accept Dr. Ruffer's views.

The question at issue is "whether immunity from infective diseases or lesions is caused by phagocytosis, that is, through the phagocytes alone, and through nothing else." Though phagocytosis may be constantly observed in immune animals, it may for all that be simply a concomitant physiological effect or change due to the acquired immunity.

I shall only discuss acquired immunity, for it is evident that the only logical method to study the process of acquiring immunity is by means of considering the changes in the organism while passing from a non-resistant to a resistant state. Personally, I think that at the present state of our knowledge, we cannot accept any one theory as exclusive, but though acknowledging that phagocytosis is of great importance as a protective mechanism, I am unwilling to accept the exclusive phagocytic theory, believing that the acquisition of immunity rests on a much broader basis than the voraciousness of the leucocyte.

I shall discuss only three chief points, as it is impossible to allude to all the various matters in the short time alloted to me. These points are: I. The Influence of the Body Fluids; II. Chemotaxis; III. Phagocytosis.

I. Do the living fluids of the body play no part in the production of immunity?

The serum of many animals has a marked bactericidal power outside the body, but we cannot establish any general law, because there is no necessary correlation between the natural insusceptibility of an animal to a disease and bactericidal power of its serum over the microbe causing such disease. This has been put forward as a grave objection to the so-called humoral theory. But I think wrongly, for it is to my mind impossible to draw any logical inference as to the artificial causation of immunity by contrasting a naturally immune animal with a naturally susceptible one. In future, experiments should be made in such a manner that the bactericidal power of the serum of a naturally susceptible animal be tested (*a*) before it has been immunized, and (*b*) after it has been artificially immunized.

If, then, any law can be established, we must expect to find one or more of three conditions—namely, after the acquisition of immunity, the serum should be:

(1) either more bactericidal,

(2) or possess greater attenuating powers,

(3) or possess greater destructive power over the toxines of the microbes.

It is too narrow to judge by the bactericidal power alone, for it is impossible to disconnect the bacteria from their metabolic products, and it is these which cause the disease. As long as the poison is not neutralized it matters not whether the bacilli are eventually killed or not.

To give examples, we find—

(1) Under the first head that

(*a*) the serum of the guinea-pig after immunization kills the vibrio Metschnikovi;

(*b*) the serum of a guinea-pig after immunization has greater bactericidal power over the Chauveau bacillus.

As an exception, we may mention the serum of a sheep protected against anthrax. But, on the other hand, Christmas succeeded in extracting from the organs of an immunized rabbit a substance which had greater destructive power over the anthrax bacillus than a substance similarly extracted from the organs of a rabbit not protected against anthrax.

According to Bouchard, it has been proven for nine infective processes that the serum of the immunized animal has greater bactericidal power than the serum of the same animal in the non-immunized condition. These are anthrax, charbon symptomatique, cholera, erysipelas, diphtheria, tetanus, pneumonia, and the lesions caused by the vibrio Metschnikovi and the bacillus pyocyaneus.

(2) Under the second heading, we find that

(*a*) the serum of the immunized rabbit attenuates the streptococcus of erysipelas;

(*b*) the serum of the immunized rabbit attenuates the bacillus pyocyaneus.

(3) Finally, under the third heading, we find that

(*a*) the serum of an immunized animal neutralizes the tetanus toxine;

(*b* and *c*) the same has been asserted with regard to the toxines of diphtheria and pneumonia.

Experiments in this direction and on these lines should be extended.

Now it is true that an experiment in a test tube with *post-mortem* or dead serum we cannot immediately apply to the changes and action of the living fluids. But we must not be too dogmatic, and say "because the serum of the naturally susceptible guinea-pig is more destructive to Chauveau's bacillus than the serum of the naturally less susceptible rabbit; *ergo*, test-tube experiments prove nothing." Such an experiment is not crucial.

Some test-tube experiments are almost conclusive. I am alluding to the action on tetanus toxine of blood freshly removed from an immunized animal. Anyhow, we may claim that test-tube experiments logically conducted are suggestive, for the serum is in the first instance derived from the plasma, and if we find constant changes in one or other direction after artificial immunization, it is reasonable to suspect changes of similar nature in the plasma and body fluids also. With Bouchard we cannot possibly consider this almost constant increased bactericidal power over a particular microbe after immunization against such microbe a mere test-tube accident.

I can only allude to some of the many objections offered. These should always be examined in the light of logical evidence, and if derived from experiments on animals of two absolutely different species, of which one happens to be naturally susceptible and the other naturally refractory, they may be rejected at once.

(1) Those who object to test-tube experiments as being artificial do not hesitate to use little paper bags filled with germs, and place them under the skin of refractory or immunized animals. Such experiments are as little natural as test-tube researches, for (*a*) we thus localize the process by artificial means; (*b*) the fluid which passes through the paper may be of an inflammatory nature, and is not necessarily the same as the normal body fluids. For this reason I have not alluded to Sanarelli's experiments, who showed

by using collodion tubes that the lymph of frogs *in corpore* can attenuate, or even kill, anthrax bacilli without the aid of phagocytes.

(2) Waiving this objection for argument's sake, Dr. Ruffer claims to have disproved the protective influence of the living plasma by his latest experiments. He placed the vaccine of charbon symptomatique wrapped up in paper under the skin of an immunized rabbit, and found that even after forty-eight hours, the vaccine will certainly kill guinea-pigs. This, to my mind, proves nothing, for it is not at all necessary that the plasma or body fluids of the immunized rabbit should kill or attenuate the bacillus; the animal will survive as long as the poison is destroyed, and the immunization of the rabbit may simply have enabled the organic fluids to do this. The fact that the exudation was able to wash away a part of the metabolic products of the bacilli secluded in the paper can only be of advantage to the growth of the same.

It may be mentioned in passing that, claiming such powers for the organic living fluids as I have done, does by no means imply a retrogression to the ancient humoral pathology; for no one, I take it, denies that all our fluids are the products of cellular secretion or excretion, and this is all that cellular pathology demands.

In studying the artificial production of immunity, the absolute followers of Metschnikoff are prone to neglect the most important part of the causation of infective diseases and lesions, namely, the chemical products of the microbes which undoubtedly cause the phenomena of such diseases.

(*a*) We find that an animal made immune against a living microbe can also resist the toxine of such microbe to varying degrees. Examples are tetanus, pneumonia, diphtheria, vibrio Metschnikovi, pyocyaneus, charbon symptomatique, and others.

(*b*) *Vice versâ*, an animal made immune against the toxine also resists the living microbe. Therefore the processes responsible for these results must assumedly be the same. Now immunity against toxines cannot in any way whatever be explained by means of phagocytosis.

I conclude, therefore, that at the present state of knowledge it is impossible to assert that the living plasma (or body fluids) are of no consequence. I will not claim more for the present.

II. *Chemotaxis* has been of late introduced as a welcome support of the phagocytic theory. Certain chemical substances, according to their degree of concentration, attract or repel the phagocytes, but if the phagocytes are in a medium already containing these chemical substances, equally distributed, they will not be attracted on adding more of these substances, unless they be added in a highly-concentrated condition. Analyzing this, we have three possible cases:—

(*a*) The metabolic products of the microbe are present in equal quantity in the tissues and at the seat of lesion, therefore no migration of phagocytes can take place.

(*b*) If the degree of concentration is higher at the seat of lesion, we shall have a migration of phagocytes thereto.

(*c*) If the degree of concentration is higher in the blood, the phagocytes may migrate back into the blood.

This teaches us nothing as to the acquisition of immunity, for (1) if true, it is simply a statement of concomitant facts; (2) on such a view, our successes in the production of immunity become merely a matter of chance and good fortune; (3) it supposes, without the slightest foundation, that in an animal immunized against a microbe, the toxine of such microbe circulates in its vessels; and, lastly, it neglects the fact that besides diapedesis, we have, as a rule, hand in hand with positive chemotaxis, a great general increase of phagocytes and leucocytes, depending of necessity on a stimulation not of the luecocytes and phagocytes but of the elements giving birth to these bodies. Hertwig in his monograph sums up this theory in the following manner; "(*a*) In an immunized organism, the negative chemotaxis, which the body exhibited before being made immune, has been replaced by a chemotaxis behaving positively towards the specific virus." If so, we may ask why and how? We are also told that "effects of the metabolic products of microbes show themselves as positive and negative chemotropism and also as acquired irritability (Reiznackwirkung). The existence of positive chemotropism explains the localization of the virus through the attraction of leucocytes and subsequent phagocytosis. The existence of negative chemotropism explains the possibility of a general infection by means of a diffusion of the micro-organisms. By means of suitable injections of bacillary products a negative may be changed into a positive chemotaxis, and thus a cure be effected." This is mystical and unsatisfactory, and treats of the body as though it were a specimen on the microscopic slide.

III. We now come to the last point, *phagocytosis*. I repeat that I fully acknowledge that this exists, and also that it is an impor-

tant phenomenon during and after the acquisition of immunity, but I am far from accepting that it is the sole, or even the chief, factor active in all cases alike. The exclusive phagocytic theory is both inadequate and unsatisfactory. I will not repeat the classical objections which are always answered by the same classical arguments, but shall enumerate a few difficulties as they have presented themselves to me.

(1) By causing fever artificially in a susceptible animal; two or three hours after the temperature has began to rise considerably there is a very great increase of leucocytes, not only of the so-called lymphocytes but also of the larger elements, and this leucocytosis persists for more than twelve hours. On inoculating the animal when in this condition with anthrax, it will die just as usual. Yet here the army of phagocytes was increased at least tenfold.

(2) Thus the increased number of phagocytes *per se* is not sufficient. They require also the special training. And here we come to the most unsatisfactory part of the theory. Before the animal is immunized the phagocytes are more or less inert against a particular microbe, but as soon as ever a relative immunity is established they are extremely voracious. We must ask, why does phagocytosis appear now or why are the cells suddenly enabled to destroy what previously perhaps killed them? Metschnikoff says by means of a kind of special selection or change of habit. This to my mind amounts to saying that the cells themselves have acquired immunity; and phagocytosis instead of explaining the processes by which immunity is acquired, becomes simply a phenomenon observed during or after the process. We must also remember that in many cases after the protective inoculation we have to wait from four to sixteen days before immunity is apparent, and during this time the natural resistance may even be decreased, as Fränkel's experiments on diphtherial immunity show. Leucocytes and wandering cells are but short-lived, and as far as we know constantly replaced through continuous division of cells which form the elements of certain tissues and organs. Thus the assumed hereditary resistance must be sought at the birth-place of these leucocytes and wandering cells. If we allow so much, we might as well say the phagocytes are immune because the whole body has become immune, or simultaneously with the immunization of the organism, phagocytosis appears.

(3) The occurrence and importance of vaccine fever during the process of immunization points to more general changes than a mere change of habit of the phagocyte alone.

(4) That changes exist in all the tissues has been shown by Emmerich, who succeeded in protecting animals by inoculating them with the tissue juices of immunized animals.

(5) Some of the methods of immunization, as the injection of the so-called antitoxine, or of small repeated doses of poison, etc., point strongly to general changes in the body, the phagocytes being altered with the rest of the body.

(6) Lastly, phagocytosis does by no means explain many of the phenomena mentioned in the first part of these remarks. Other objections might be raised, but I am afraid I have been using up time too much already.

In conclusion, it seems to me that we cannot hold any one process exclusively responsible for the artificial production of immunity. The primary cause of immunity, however, must be sought beyond the leucocyte or phagocyte, and also beyond the fluids of the body and, according to the maxims of cellular pathology, depend on changes in the cell-life of the organism which at the present we are unable to understand. It is in consequence of these as yet obscure molecular changes that phagocytosis and the other phenomena observed after or during immunization appear, but none of these alone can be considered the cause of immunity.

[TO BE CONTINUED.]

PEROXIDE OF HYDROGEN.

The following formulæ are from Dr. B. W. Richardson's Asclepiad:

For Fermentative Dyspepsia:

℞
S lut. hydrogenii peroxidi (10 vols.).....ʒ iiss.
Spiritus vini rectificati.....ʒ iij
Ol. creasoti.....ℳ vj.
Glycerini puri.....ʒ vj.
Aquæ destillatæ.....ad ʒ vj.
Misce. Fiat mistura. Dose, f ʒ j.

For Hæmoptysis and Other Hæmorrhages:

℞
Solut. hydr genii peroxidi (10 vols.).....ʒ iiss.
Tannin.....ʒ ss.
Glycerini puri.....ʒ vj.
Aquæ destillatæ.....ad ʒ vj.
Misce. Fiat mistura. Dose, f ʒ j.

An Antidote and Astringent Gargle.

℞
Tannin (pure).....gr. x.
Glycerine (pure .....ʒ j.
Rectified spirit.....f ʒ iv.
Distilled water.....f ʒ iv.
Solution of peroxide f hydrogen (10 vols.) sufficient for 8 fluidounces. To make an 8-ounce gargle, to be used in the manner directed.

A Useful Collyrium.

℞
Solution of peroxide of hydrogen (10 vols.)..ʒ iv
Tannin (pure).....gr. v.
Rose-water.....to f ʒ viij.
To make an 8-ounce collyrium, to be used in the manner directed.

REMOVAL OF SARCOMA OF MESENTERY AND RESECTION OF A PORTION OF SMALL INTESTINE.

By DR. JAS. McCANN,
SURGEON TO THE WEST PENN HOSPITAL.

Reported by Dr. E. E. Wible, Resident Physician.

Thomas W., a German, æt. 40, was admitted to the general surgical ward of the West Penn. Hospital on Nov. 30th, 1891. He was a married man, and was employed in a rope and cordage factory. He entered the hospital for the treatment of a tumor which he had discovered in his abdomen. His family history was negative, with the exception that his mother and an aunt had died of dropsy. As to his personal history, he said that he had had inflammation of the lungs and rheumatism some years ago. Last September, pain in his abdomen attracted his attention to a hard movable tumor of about twice the size of a normal kidney. This tumor occupied usually the right inguinal region, but it could easily be manipulated to any position in the abdominal cavity.

The existence of this tumor had not been previously suspected by the patient, who states that he has had no gastro-intestinal disturbance, but was troubled some with constipation. His general health is excellent, and he does not seek treatment on account of any pain or physical debility, but the knowledge of the presence of the growth worries him and causes him to be uneasy.

The tumor is hard and smooth, spherical in shape, and it seems at times to change its position with the peristaltic movements of the intestines.

A diagnosis of a morbid growth was made, and it was differentiated from a floating kidney by reason of the absence of any urinary trouble and its free mobility.

Dr. McCann decided to perform laparotomy for the removal of the tumor, which was accordingly done at his surgical clinic before the students of the Western Pennsylvania Medical College, on Dec. 1st, 1891. After opening the abdomen he exposed at once a tumor adherent to the mesentery and a loop of the small intestine. The tumor was partly dissected away, when it became apparent that it would be necessary to resect about eight inches of the bowels on account of the tumor being so closely adherent to it, and incorporated with the wall of the intestine. Gibson's clamps were applied to the fixed portion of the intestine to prevent fæcal extravasation during the operation of enterectomy. The bowel was then severed by scissors and a "v" shaped portion of the mesentery, corresponding with the portion of the bowel, was also removed.

The cut edges of the mesentery were then coaptated by continuous sutures after the hæmorrhage had been arrested. The open ends of the divided intestine were then united by two rows of fine silk sutures; one uniting the mucous surface with continuous sutures; the other uniting the muscular and serous coats with continuous Lembert's sutures. The incision through the abdominal wall was then closed with silver-wire sutures and a rubber drainage tube was inserted, which was removed on the second day. The operation was performed with strict attention in every detail to antiseptic precautions. The tumor weighed a few ounces short of two pounds. The microscopical examination disclosed that it was a spindle-shaped sarcoma. The patient received nothing but sips of hot water during the first forty-eight hours following the operation; he was then allowed a meagre liquid diet for the ensuing two weeks, and he then gradually returned to the use of solid food. No opiates were administered because he did not have any pain. His pulse and respiration never exceeded the normal. His highest temperature was on the evening of the seventh day when it registered 101.4°; it then gradually returned to the normal in four days and remained so henceforth. On the sixth day he had two natural evacuations from the bowels and every day succeeding had one or two evacuations.

In order that he could enjoy the association of his family on Christmas day he departed from the hospital in perfect health on Dec. 21st, 1891, just twenty-one days after the operation.

Three months after the operation the patient reports that he is at his accustomed employment every day and that he never enjoyed better health in his life.

PYOKTANIN IN OPHTHALMIC PRACTICE

As a result of the employment of pyoktanin for a period of three months in the ophthalmic service of Bacchi, Rescoussie (*Annales de la Policlin. de Paris*, 1891, No. 12, p. 549) concludes that the agent is an excellent antiseptic in ocular surgery—to be preferred to all others. It exercises a favorable influence upon simple conjunctivitis, and especially upon granular conjunctivitis. It is of doubtful efficacy in case of rebellious ulceration of the cornea, and is almost useless in case of purulent ophthalmia.

A CASE OF ACUTE PARENCHYMATOUS NEPHRITIS.

By MARTIN W. BARR, M.D.,
Brookline, Mass.

The treatment of acute parenchymatous nephritis is a series of compromises all through the whole course of the disease, and each drug given cannot be too carefully watched. So much has been written on the subject—on purely theoretical grounds—that frequently when a case of this dreadful disease comes under the care of a busy general practitioner he is bewildered by the variety of remedies presented. I have endeavored to describe this case most accurately, going into all the minute details of both symptoms and treatment.

S. T.,—aged thirty years. An unmarried gentleman of unexceptionable habits. Native of England. Had been in America about ten months. Was engaged in intellectual work for a number of years. Family history good. Patient had not been feeling well for several weeks. Complained of headache. Was irritable and listless. Sleep was disturbed at night, would doze much during the day. Appetite failed.

On May 3, 1891, complained of sore throat. On examination I found the throat much congested.

Prescribed:

℞ Fld. ext. rhus. glab.
Glycerine.....āā ʒi
Sat. sol. potass. chlor..... ʒij
M. Sig. Gargle every half hour.

Used gargle during day, and in the evening throat was improved. Took a walk and half-an-hour's smoke after night-fall. Retired early.

May 4th—Was dull and heavy and slept much during the day. Took but little food. In the evening had a slight chill. Became dizzy and staggered when walking. Complained of double vision. Conjunctiva much congested. Tongue was heavily coated. Gave hydrarg. chlor. mitis, gr. iii., and later, sod. brom., gr. l.

May 5th—Passed rather a restless night. Was very nervous and exhibited signs of mental disturbance. Had severe cephalalgia and aching pains in shoulders and lumbar regions. Voided urine in large quantities, but with great difficulty. The desire to micturate was almost constant, and the flow strongly resembled that in polyuria. The urine was colorless, and contained neither albumen nor sugar. Specific gravity was 1006.

Polydipsia was a marked symptom, the craving for cold drinks being most intense. This continued until convalescence.

Kept patient in bed and gave:

℞ Potass. iodidi.....gr. clx
Syr. sarsap. comp.....ʒss.
Aquæ.....ʒiss.
M. Sig. Teaspoonful in water every our hours.

Also:

℞ Fld. ext. hyoscyamus.....grs. xl.
Sodæ bicarb.....grs. xxxii.
Aquæ, q. s.,.....ad ʒi.
M. Sig. Teaspoonful in water every two hours.

In addition I used the galvanic battery, applying the electrodes alternately along the spine, and to the hypogastric, lumbar, and inguinal regions; and also to the root of the penis. I began with moderate currents, but rapidly increased them in strength. Gave milk freely.

May 6th—Patient pessed a bad night. Muscular twitchings of face and limbs. For hours I momentarily expected a convulsion. Uræmic symptoms were very prominent. There was but a faint odor to the urine—breath and perspiration were strongly urinous. Cephalalgia was less severe. Vertigo very marked. Conjunctiva was a bright yellow and blood-vessels strongly injected. Disordered vision—diplopia. A *bruit* was distinctly audible in cardiac region. No fever. Pulse slow and full. Respiration during day was shallow and irregular (Cheyne-Stokes); toward evening labored. There was some delirium which was mild and muttering. Tongue still furred. Teeth covered with sordes.

Ordered tinct. digitalis, m. v., *ter in die*. In the evening gave hydrarg. chlor. mitis., gr. v., followed by a Seidlitz powder.

May 7th.—Patient passed another wretched night. Diplopia more marked. Everything appeared a bright green color. Delirium increased. Would lie muttering to himself, then suddenly have attacks of wild maniacal excitement. Had illusions and hallucinations. Thought that he had had a quarrel on the quay with some negro roughs, by whom he had been injured. Afterwards a strange man had given him a cigar and told him to go lie down in his (the man's) room. This story was repeated over and over. He held conversations with an imaginary man, clad in blue trousers, sitting on a stile. Was much interested in some black trees. Attended his own funeral. Had a severe disagreement with his brother. Was much afraid of a box, which he thought had been placed high up in a window by his head. Became violently angry with me, and, later, imagined that I was the devil. Toward evening became more quiet but insisted that he was not in his own chamber. Bowels moved freely. Urine passed in large quanti-

ties and with great difficulty. Continued treatment, and at bedtime gave: sod. brom. ʒj., and morph. sulph., gr. ¼.

May 8th.—Passed a restless night. Arose frequently to urinate. Was extremely weak and dull. Wild delirium had subsided, and given place to listless apathy. Patient lay during morning in a lethargic state, from which he could be easily roused to take nourishment and medicine. Toward noon he began to wander again. Spoke of a choir singing; held a conversation with a little child of whom he was very fond; then began to talk of suicide. Gave podophyllum gr. ¼ every hour, until three doses were taken. Bowels were freely moved late in the afternoon. Fell asleep early in the evening, waking occasionally. Recognized me. Strong urinous odor to breath and perspiration. Gave chloral gr. x, and morph. sulph. gr. ¼ at bedtime. I now placed patient on an absolute milk diet, feeding him at regular intervals. He would take seven pints in twenty-four hours. My schedule ran thus:—

8 a. m.	1	pint.
10.30 a. m.	1	"
12 m.	1	"
3 p. m.	1	"
6 p. m.	1	"
10 p. m.	1	"
During night when awake	1	"

May 9th.—No change of any importance. Hebetude of mind still continued. Heart irritable and irregular in its movements. Patient had no idea of time. Had completely lost it. Morph. sulph. gr. ½ at bedtime.

May 10th.—Slept rather better during night. Mind was wandering. Was aphonic, speech unintelligible at times. While left alone for a few minutes, escaped down two long flights of steps, and engaged in an altercation with a man whom he met. Was returned to bed much exhausted. Passed urine with less difficulty, and in smaller quantity. Bowels freely moved by hydrag. chlor. mitis. gr. iii, and podophyllum gr. ½. Stopped hyoscyamus mixture, also digitalis.

May 11th.—Much disturbed by having room changed. Toward evening became drowsy.

May 12th—Patient passed a quiet night. Abnormal flow of urine had ceased. He had an almost constant desire to urinate, but could pass only a few drops at a time. Urine of a dark red color, and was loaded with urates. Bowels freely moved, spontaneously.

May 13th.—Urinous odor to breath not so marked. But little odor to the urine. Patient was still very dull.

May 14th.—Micturition not so frequent, and only a small quantity voided at a time.

May 15th—Urinous odor rapidly disappearing from breath. Urine was a pale straw-color, neutral reaction, specific gravity 1010, and contained neither albumen nor sugar. Small cloudy sediment on standing-water. Microscopic examination revealed some pale hyaline casts. Polydipsia was still most intense. Slept much during day. In the evening had an attack of maniacal excitement which came on without warning. Had the delusion of a quarrel. Was quieted with difficulty. In the morning I gave podophyllum gr. ⅔, followed in half an hour by a Seidlitz powder. Full movement resulted. Stopped all other medicine and prescribed:

℞
Tinct. digitalis ..... ℥ lxxx.
Potass. acetat. ..... ʒ vsi.
Aquæ q. s. ad ..... ʒ viii.
M. Sig.—Teaspoonful well diluted every 4 hours.

This I gave between meals. Directly before each meal the patient took tinct. ferri chlor. m. x., together with Mensmen's beef tonic, ʒ jss. Immediately following the meal he took liq. potass arsenit. m. ii., in wineglassful of water. At bedtime gave morph. sulph. gr. ¼ and sod. brom. ʒi.

May 16th.—Had rather a quiet night. Mind was much lighter, although he had no idea of time. Talked coherently. Aphasia disappearing. Diplopia in less degree. Dipsomania unabated. Allowed him to get up for a few minutes. Was extremely weak. Some diarrhœa in afternoon. Promptly checked it by fl. ext. geranium maculatum, and tinct. opii m. x. to iv., every hour until took four doses.

May 17th.—Improving; delusions disappearing. Eyes clearing up, congestion less intense, yellow color fading. One healthy voluntary stool. Allowed him to smoke a little morning and evening. He also took two short walks. Much exhausted afterwards.

May 18th—Gave usual sleeping potion on previous night. Slept through the night and until 11 a. m. Is much improved in every way. Began to take solid food. Steak, eggs, custard, bread and butter, etc. Took two walks. Was not so tired after them.

May 19th.—Mind quite clear. Urine voided in normal quantities, and with no difficulty. Appetite good. Took much exercise during day. Was extremely tired at night. Gave sleeping draught.

May 20th.—Diplopia disappearing rapidly. Dipsomania is not nearly so intense. Urinous odor hardly perceptible on breath.

May 21st.—Took a twenty-six mile ride on the cars, and did much running around in the

city. The day was very warm, and in the evening patient was much exhausted. No movement from bowels.

May 22d.—Slept soundly during the night. Eyes yellow and slightly congested. Urinous odor to breath exaggerated. At 2 p. m. gave pulv. jalapæ comp. gr. xiv. Free evacuation in the evening.

May 23d.—Restless night. Urine light colored. Specific gravity, 1020. Taking nourishment freely. Good movement from bowels. On this day the patient was removed from my personal care, although I continued to prescribe for him at a distance. I followed the treatment last mentioned for a number of days, and the patient improved rapidly. About June 1st I changed treatment, and put him on the chloride of gold and sodium. The prescription read:—

℞ Auri et sodii chlorid. .....gr. iii.
Aquæ.....ʒ iv.
M.
Sig.—Teaspoonful in water after each meal.

When patient had finished this, I reduced dose to gr. , *ter in die.*

No inconvenience in any form was experienced from the continued use of this drug.

By the middle of July discontinued all treatment. Saw patient on August 7th. Looked well and strong. A microscopic examination of the urine was made on October 5th; a number of granular casts could be plainly seen.

At the present time of writing the patient is in splendid mental and physical condition. I have warned him of the great care he will have to take of himself.

The most curious symptom in this case was the vast quantity of urine passed in the beginning. So large was the amount that I at first thought the disease was diabetes insipidus. Usually in acute parenchymatous nephritis the flow is diminished, or suppressed entirely.

The delirium is also worthy of special notice. It was that of enteric fever, but there were no other typhoid symptoms. One thing I should *not* recommend in the treatment of acute Bright's disease—the allowing the patient to smoke. My patient was determined to smoke, and no amount of persuasion nor arguing on my part could prevent him. When I found that he was rapidly working himself into a state of mental excitement, I quietly submitted. Fortunately, no bad results followed, but it is an experiment I should not care to try again. It will perhaps be noticed that I never allowed my patient to lower his vital forces, but kept the fuel burning brightly by the forced feeding—milk and beef tonic.

A HAWTHORN TWIG IN A MAN'S EAR FOR THIRTY YEARS.

By A. O. STIMPSON, M.D., C.M.,
Thompson, Pa.

John Nickels, aged 74 years, came from Parkham, England, to this country some eighteen years ago, and gives the following history of himself:

"In the month of January, 1844, while forcing his way through a dense hawthorn hedge the end of a hawthorn twig entered his ear and broke off, causing him considerable pain at the time. After he had returned home it had bled quite freely, but on examination nothing could be discovered in the ear. In the course of time, however, he became quite deaf, the ear commenced to pain him considerably, attended more or less with a purulent and fetid discharge. Shortly previous to this, he had been to several reputable surgeons and submitted to a thorough examination, but they claimed that no foreign object could be found in the labyrinth of the organ. When the amount of discharge from the ear became diminished in quantity the pain and discomfort became sensibly aggravated, and gradually the sense of hearing on that side became seriously impaired. His wife says that at times he has acted as if he were partially insane, and she noticed that he felt worse when the discharge became diminished in quantity. The pain has continued to be very severe at times, especially after any extra amount of labor or exertion in his daily occupation as a farmer and agriculturist, and, as he describes it, 'crackling sounds were heard in his head.'"

With the exception of this infirmity and the resulting semi-deafness, his general health has been very good. On Monday, the 16th day of January, 1879, he came to my office and requested me to examine his ear and see if nothing could be done for his relief, claiming all the while that he felt as if there were something in his ear. After introducing a silver bivalve speculum in his ear, with the aid of a strong artificial light I discovered a dark hard-looking substance projecting through the internal meatus. With a pair of long narrow-bladed forceps I succeeded in getting hold of the object, and by careful manipulation finally extracted it. There was very little bleeding attending the operation, but a profuse discharge of very offensive purulent matter. The substance extracted was the budded end of a twig a half inch in diameter and one and a half inches long by actual measurement, which was somewhat

flattened on two sides. It consisted of tough, hard, woody fibre with the adherent bark. Mr. Nickels took the substance home with him and unfortunately lost it, so that afterwards I could not obtain it to exhibit as a specimen. He persistently claimed that the substance entered the right ear, while it certainly was extracted from the left ear. I am confident, however, that he certainly must be mistaken in regard to it as the broken end of the twig presented first. It seems almost incredible that this broken piece of a hawthorn twig could have remained in this man's head for over thirty years without giving rise to more serious symptoms; but both his wife and himself at the time persistently attest to the truth of the aforesaid statement.

After the operation he was advised to syringe out the ear with the following lotion, to be used warm:

℞ Acid carbolic, (officinal strength).....gtts xxv
Glycerine,.....℥ j
Aquæ ferveus,.....℥ iv.

His wife stated (a month after the operation) that he had not since complained of severe pain in his head, and that there has been but very little discharge. His hearing, however, has not materially improved, but he certainly has very much gained in general health, and he has not been annoyed with ringing noises in his head as formerly. After the extraction of the twig by the aid of the speculum I could plainly see the drum of the ear had been perforated, hence there was no possibility of his sense of hearing ever becoming improved.

ENDOCARDITIS FOLLOWING CIRCUMCISION.

Czerny (*Prager med. Wochenschr.*, No. 39, 1891) has reported the case of a child of Israelitish parents, that was without antiseptic precautions circumcised on the fourteenth day after birth, and two weeks later presented restlessness, apparent difficulty of breathing, elevation of temperature, and loss of weight. On osculation over the body of the heart systolic and diastolic murmurs were heard, but the organ was not enlarged. The diastolic murmur subsequently disappeared and cardiac hypertrophy developed. Prior to the operation the heart had been auscultated, and no murmurs were heard; so that etiological association between the operation and the endocarditis was quite clear.

Strychnine is used as an antidote for snake bite in Australia.

SELECTED FORMULÆ.

THIOL IN CONSTIPATION.

The following formula has been found useful (*Pharm. Centralb.*) in constipation:

℞ Thiol.....gramme 0.10.
Micæ panis.....q. s. ut ft. massa.
Ft. pil. no. x.
Sig. One pill daily.

—*La Médecine Moderne*, Suppl., November 5, 1891, p. 170.

CREOLIN-IODOFORM OINTMENT.

Creolin.....m. xx.
Iodoform.....gr. xl.
Vaseline.....℥ i.
S. Make an ointment.

The odor of iodoform is completely masked. —*Nouveaux Remèdes.*

INFLUENZA.

Prof. Bacelli, of Rome (*Le Bulletin médical*, No. 4, 1892), praises the following formula in the grippe:

℞ Phenacetine.
Salicylate of quinine, } .....āā cgms. 10.
Camphor,
Kermes mineral, ...āā mgms. 3.

Sufficient for one powder. Three or four such powders a day.

PIPERIDZINE.

Piperidzine (*Lo Sperimentale*, No. 21, 1891), the great uric acid solvent, is prescribed as follows:

℞ Piperidzin. pur..... .....gr mme 1.
Aq. destillat.....grammes 180.
Syrup corticis aurant..... " 20.

Sufficient for twenty-four hours. The dose may be gradually increased to three grammes (forty-five grains) per day.

For hypodermatic use inject as follows:

℞ Piperidzin. pur.....decigrammes 3–5.
Aq. destillat.....grammes 10.

Inject a Pravaz syringeful every two days. After fourteen days the dose may be increased to ten centigrammes

ACUTE BRONCHITIS.

℞ Vini ipecacuanhæ.....℥ ij.
Liq. potassii cit.....℥ iv.
Tinct. opii camphorat.,
Syrup. acaciæ.....āā ℥ j.

M. Sig. A teaspoonful, thrice daily, in the first stage of ordinary bronchitis.

HICCOUGH.

Dr. Whelpley recommends the following:

Subnitrate of bismuth.....grains 45.
Oxide of zinc..... " 60.
Valerianate of zinc..... " 60.
Powdered calumba..... " 60.
Powdered opium..... " 1½.
Spirit of anise to flavor.

M. The dose is half a teaspoonful in a wine glass of sweetened water.

EARACHE.

An earache cure, recommended by a German medical journal, is made as follows:

℞ Chlorinated camphor.....pints 5.
Glycerin..... " 30.
Oil of sweet almond..... " 10.
Mlx and moisten cotton, and place in the ear.

—*Cincinnati Medical News.*

CREOLIN-IODOFORM OINTMENT.

The advantage of this prescription (*Les Nouveaux Remèdes*) is said to be that the smell of the iodoform is well masked.—*Therap. Gazette.*

Creolin.....grains 15.
Iodoform..... " 30.
Vaseline.....drachms 6.
Make into an ointment.

OINTMENT FOR ERYSIPELAS.

Corrosive sublimate .....gr. ss.
Lanolne.....5 v.
Vaseline.....gr. ss.

—*Med. Press and Circular.*

PROPHYLAXIS AND TREATMENT OF MERCURIAL STOMATITIS.

Dr. Feibes (*La Semaine médicale*, No. 57, 1891) regards dentifrice powders and gargles as the best means of preventing mercurial stomatitis during a "course" of mercury. He uses the following powder as a dentifrice:

℞ Cretæ preparat.....grammes 32.
Potass. chlorat.,
Corticis cinchonæ rubræ.....āā " 16.
Ratanhiæ..... " 10.
Sapon. medical..... " 23.
Essent. menth. piperit..... " 3.

As a gargle he employs:

Alumin. acetat.....grammes 10.
Aq. destillat.,
Aq. flor. aurantior.....āā " 200.

If the gums become sensitive they may be sponged three times a day with:

℞ Tinct. myrrhæ,
Tinct. nuc. gall.,
Tinct. ratanhiæ.....āā grammes 5.

CHILBLAINS.

The following is recommended:

℞ Ol. terebinth.,
Balsam copaiba.....āā ʒ i.
S. Apply to surface when not denuded.

—*Notes on New Remedies.*

DISINFECTANT INTRA-UTERINE INJECTION.

Dr. Ter-Grigoriantz (*La Semaine médicale*, No. 59, 1891) praises the following:

℞ Sublimat. corrosiv.....cgms. 10.
Acid carbolic.....gms. 20.
Acid boric..... " 40.
Acid salicylic..... " 5.
Zinci chlorid..... " 10.
Aq. destillat..... " 2000.

DERMATOL.

In the clinic of Dr. von Rogner, at the Wieden Hospital, Vienna, dermatol has been found efficacious in the treatment of wounds, burns and abscesses. It was used:

1. Pure, as dusting-powder.
2. As ointment:

℞ Dermatoli.....ʒ v.
Vaselin. flav.....ʒ xx.
M. Sig. Ungt.

3. In collodion emulsion:

℞ Dermatoli.....ʒ iij.
Collod.....ʒ iij.
M. Sig. Use locally.

INFLUENZA COLDS.

"Few remedies are more reliable, and act better as a preventive, or lessen the distressing symptoms of an influenza cold, than the following mixture:

℞ Sodii salicylas.....ʒ jss.
Liq. ammon. acet.....ʒ ij.
Aq. camph.....ad ʒ vj.
Misce. Capt., ʒ ss. omnis 3tiis horis.

If this be taken every two or three hours when the first symptoms of cold come on, it will usually ward off the attack."—*British and Colonial Druggist.*

BENZOL IN INFLUENZA.

Robertson (*British Medical Journal*, No. 1621, p. 171) recommends the employment of benzol in the treatment of influenza—and he has likewise found it useful in the treatment of whooping-cough. The symptoms of the disease are speedily and favorably influenced, and pneumonia seems to be prevented. Benzol can be dispensed in capsules or in mixture, in doses of three minims for children and five minims for adults, every two or three hours. The following formula may be employed:

℞ Benzol. pur.....ℳ lxxx.
Spts. vini rect.....f ʒ ss.
Spts. chloroformi.....f ʒ iij.
Mucilag. tragacanth.....ad f ʒ viij.
M. Sig. A dessertspoonful or a tablespoonful at a dose, to be taken in lemonade.

MIXTURE FOR HÆMORRHAGE.

℞ Powdered ergot.....drachms 2½.
Sulphuric acid.....minims 30.
Distilled water.....pint 1.
Boil and evaporate to six ounces and then add
Alcohol.....drachms 6.
Syrup of cinnamon.....ounce 1.

—*Pharmaceutische Post*, No. 27, 1891.

GONORRHŒA.

The following (*Lo Sperimentale*, No. 18, 1891) is spoken highly of in gonorrhœa:

℞ Ergotin.....dgms. 3.
Aq. destillat.....gms. 300.
Inject twice a day.

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LEADING ARTICLE.

IODOFORM GAUZE TAMPON IN POST-PARTUM HÆMORRHAGE.

The method of packing the uterus with strips of iodoform gauze for post-partum hæmorrhage, occurring either from atony of or injury to the womb, was originally advanced by Dührssen. Although the previous experiences with the method have been most satisfactory, still objections are very frequently raised: the tampon may in many cases be superfluous, it might easily lead to an infection, and it hinders the contraction of the womb, all of which would seem designed to increase the possibility of hæmorrhage rather than lessen it.

These opposing statements have led Dr. Stæheli, of the Obstetrical and Gynæcological Clinic of Berne, Switzerland, to report his extended experiences with the method. This report first appeared in a recent number of the *Correspondenzblatt für Schweizer Aerzte*, but has also been editorially discussed by the *Medicinische Neuigkeiten*, and elsewhere.

That the method has an indisputable value is evident from the fact that out of 5,424 births occuring at the above named institute since 1880, there have only been nine deaths from hæmorrhage occurring shortly after child-birth.

Out of forty-nine cases in which the tampon was used, a passing elevation of temperature was observed in five cases, and death in one case, owing to sepsis subsequent to Cæsarean section. These results as opposing the objection of possible infection are most favorable in support of the procedure, especially as it must be remembered that the tampon was used in the most severe cases, where frequent manual examinations had not only been undertaken, but where operative procedures had not infrequently been resorted to.

Regarding the third objection raised, viz. that a tampon in the utero-vaginal canal is likely to do more harm than good, the simple fact that in all of the forty-nine cases all hæmorrhage from the genitalia was rapidly

and permanently checked, entirely sets aside this objection. In no case was any hæmorrhage observable after a removal of the tampon, and only a few insignificant clots were ever formed in the meshes of the gauze. These results were obtained in hæmorrhages resulting from atony of the uterus, which had withstood every other available therapeutic means, and also in cases of injury where a suture could not be made, either from the fact that the bleeding point could not be rendered visible, or else because the undertaking of such an operation in the face of so copious a hæmorrhage was out of the question.

Since the adoption of Dührssen's iodoform tampon in obstetrical therapeutics the course of a birth complicated by post-partum hæmorrhage may be described as follows:

A diagnosis as to the source of the hæmorrhage is of primary importance, whether it be from the utero-placental wound, or from a laceration of the vulva, vagina or uterus. The hand of the operator, placed over the uterus from without, can easily distinguish whether that organ is contracted or relaxed, and at the same time if the bladder is full. In the latter case the uterus will be found to be pushed upwards and usually to the right. The bladder should then be quickly emptied by means of a catheter. If the uterus is relaxed it should be rubbed or kneaded. The organ then becomes firm, but if the hæmorrhage continues unabated it is evident that we are dealing with a laceration. If the bleeding only occurs with a relaxed uterus then we are dealing with a hæmorrhage from the utero-placental wound. If the bleeding occurs only in a somewhat less degree when the uterus is contracted, then we have a hæmorrhage resulting from atony complicated by a laceration.

If the laceration can be rendered visible—and in searching for such an injury we should include an inspection of the clitoris region, the hymeneal ring, the perineum, and the vaginal walls—and if the hæmorrhage is not too copious, a wad of absorbent cotton should be pressed against the parts until the afterbirth has come away. Then the lacerated parts should be united with catgut sutures. In other cases where the hæmorrhage is of a very copious character, the lacerated parts should be immediately united with catgut sutures without waiting for the after-birth to be expelled. If the injury cannot be seen, a careful manual examination of the vagina should be made to see if there is any perforation. If there is, a hot douche (45° to 50° C.) of a 1 : 4000 bichloride of mercury solution, will frequently check the hæmorrhage. If the injury does perforate into the vaginal cavity, then, after removal of the after-birth, there remains no other procedure at our disposal than the tampon.

If we are dealing with a uterine atony we should with all speed, either by Credé's method or manually, remove the after-birth and douche the womb with a hot 1:2000 solution of bichloride of mercury (according to Stæheli); the uterus should be rubbed in the meanwhile, and a hypodermatic injection of 1.0 gramme of ergotin given in the thigh. If these means are without avail, we must use the tampon.

In narrow genitalia the cervix must be caught with hooks and brought forward, but when there is plenty of room the procedure is a most simple one. The armamentarium consists of several strips of 30 per cent. iodoform gauze 2½ meters long (about three yards) and 5 centimeters (2 inches) wide. Each strip contains 1.7 grammes of iodoform; further, a tampon of moist salicylated cotton (4 per cent.) about the size of an English walnut for the mouth of the vagina.

After the tampon has been inserted, the operator should not fail to watch the uterus for an hour or so; or else a firm abdominal binder, into the folds of which a sad-iron or other weight has been placed, is applied, so that the weight comes over the fundus, preventing the relaxation of the womb in that direction. In severe cases an ice-bag may be placed over the abdomen, and one-half to one gramme of ergotin (Nienhaus') injected hypodermatically.

The uterine cavity, cervix and the vagina should all be tamponed, so that the possibility of an external and visible hæmorrhage being

merely transformed to an internal one is obviated, which could easily be the case if only the cervix or vagina were packed.

In the usual cases of atony and minor injuries or lacerations, the tampon can be removed the next day. In cases of severe injuries it should be left in place for forty-eight hours. The tampon should never be removed, however, without having another in readiness in case of an emergency. This rule is of the greatest importance, and should be always followed, at least in cases of severe injury.

In cases where more than five or six strips of gauze are necessary for the tampon, a few strips of salicylated gauze can be added advantageously. A mixed tampon of this kind should be practically odorless after having been kept in place for forty-eight hours.

We would raise another point of warning: in hurried packing of the uterus, etc., lacerations of the vulva in the region of the clitoris very easily occur, but can be prevented by due care.

In cases of rupture of the parts, besides a careful packing of fundus, cervix and vagina, the seat of the rupture itself and that part of the pelvis into which it opens must also be packed. Pressure must be maintained by a firm abdominal binder, augmented by cotton packing over the fundus, etc.

In one case of this kind resulting successfully, reported by Stæheli, no less than seventeen strips of gauze were used in completing the tampon.

In a few cases where large quantities of the gauze were used, iodine was traced in the urine. No unpleasant symptoms were ever observed as resulting from its use.

In conclusion, the obstetrician who has in his instrument case the iodoform tampon may rest assured that no woman need bleed to death from a post-partum hæmorrhage while under his care; and even if he be called in after the bleeding has begun, the chances are that he can save the case. After having applied the tampon in a case of atony, he can leave the patient without fearing a secondary hæmorrhage. Again, the tampon is easily applied; there is no need of a skilled assistant; and, finally, the procedure should not be used as a last resort, but be undertaken as soon as it is seen that the usual remedies have failed, and before the patient has suffered seriously from loss of blood.

LITERARY NOTES.

—The *New Albany Medical Herald* has been resurrected.

—The most recent addition to the list of medical journals is *The National Medical Review*, edited by Dr. Chas. H. Stowell, and published monthly in Washington, D. C.

—Mrs. Gladstone's first article in the series of "Hints from a Mother's Life," which she has written for *The Ladies' Home Journal*, will be printed in the April issue of that periodical.

—The first number of a new monthly—*The International Medical Magazine*—has been issued by the J. B. Lippincott Co. It contains some very interesting papers, and will doubtless prove a valuable addition to current medical literature.

BOOK REVIEWS.

A PRACTICAL RESUME OF THE MODERN METHODS EMPLOYED IN THE TREATMENT OF CHRONIC ARTICULAR OSTEITIS OF THE HIP. By Charles F. Stillman, M. Sc., M. D., Chicago., 118 pages. Price: Paper, 25 cents; cloth, 50 cents. Physicians' Leisure Series: Geo. S. Davis, publisher, Detroit, Mich., 1891.

This work has been compiled by the author with the object of acquainting practitioners and medical students with the most recent views held by orthopœdic writers upon the management of hip disease.

The subject is treated in a clear and concise manner, and apparently, is discussed with entire freedom from personal prejudice.

The individual methods of treating this affection as followed by Drs. H. O. Thomas, De Forest Willard, E. J. Chance, Bernard Barton, E. A. Andrew, Louis, Bauer, C. F. Taylor, L. A. Sayre, N. M. Shaffer, M. J. Roberts, R. W. Lovett, A. B. Judson, A. M. Phelps and W. Blanchard are fully presented, and take precedence to that adopted by the author, with which the volume concludes.

The book is copiously illustrated. The perusal of its contents will amply repay the reader.

DISEASES OF THE HIP-JOINT. FISKE PRIZE FUND DISSERTATION, No. XLII. Robert W. Lovett, M. D. Geo. H. Ellis, Boston, 1891.

This very attractive monograph upon the Etiology, Pathology and Treatment of Diseases of the Hip-joint was awarded the Fiske Prize in 1891. That the award was a just one the readers will be convinced after a careful perusal of the work.

The author first considers Acute Arthritis of the Hip-joint, which he considers a form of that disease which was first described by Mr. Thomas Smith, of London, under the title of Acute Arthritis of Infants. This affection which is a rare one, and one which is often confounded with other diseases, has been very clearly described by Dr. Lovett.

The author also describes acute synovitis and chronic serous synovitis of the hip-joint, and treats these subjects in such a manner that a careful study of his work will do much to correct the error which is often made of classing these cases with the disease we recognize as tuberculous osteitis or hip disease. The subject of tuberculous osteitis of the hip-joint is treated in a masterly manner, and the author's views upon the etiology, pathology and treatment of this affection are fully up to the times.

Dr. Lovett believes that the best results are obtained in this affection by constitutional and mechanical treatment, and is not in favor of early operative procedures, reserving excision of the hip-joint for those cases which have passed beyond the point where mechanical treatment can be applied with advantage, or for those in which it is practised as a life-saving measure. We confess that we have been disappointed in the ultimate results of excision of the hip-joint in many cases, and agree with the author that the results, as a whole, are not as satisfactory as those obtained by mechanical treatment. The author describes many forms of splints and apparatus employed in the treatment of this affection, and shows their application in many cases by means of excellent illustrations.

The work also contains articles upon Gummatous Osteitis, Arthritis Deformans, Charcot's Disease and Malignant Tumors of the Hip, and an excellent paper upon Congenital Dislocations of the Hip-joint.

It has seldom been our fortune to receive a work which shows such careful study of the subject matter treated, and which contains so much valuable information, and we most sincerely congratulate Dr. Lovett upon its authorship. The book is gotten up in a most attractive form, and the numerous photographic illustrations add much to its attractiveness.

THERAPEUTICS.

OLIVE OIL IN LARGE DOSES IN ILEUS.

Dr. Mitchell (*La Sémaine médicale*, No. 51, 1891) has used large doses of olive oil with success in the treatment of eight cases of intestinal obstruction. Seventy grammes (2½ ℥) of oil are taken every two hours, or even more frequently. One patient took 500 grammes (16 ℥) during one night, another a litre (a quart) in a few hours. An improvement took place in from three to twenty-four hours.

CONVULSIONS TREATED BY COMPRESSION OF THE CAROTID.

Dr. Leopold Roheim, of Budapest, publishes in the *Gyógyászat* a case of eclampsia which he had, after the failure of all ordinary remedies, successfully treated by compression of the carotid. The case, which is quoted by the *Pester Mediciñisch-Chirurgische Presse*, was that of a robust man of fifty-six, who had been suffering for years from cancer of the bladder, with occasional hæmaturia. The man had been attacked by a most violent eclamptic paroxysm, which was mainly confined to the left side. Dr. Roheim prescribed in vain musk, valerianate of zinc, bromide of potassium, asafœtida, hypodermic injections of morphia, enemata of hydrate of choral, and frictions with mustard, and at last employed compression of the carotid. After constant compression for some time of the right carotid the convulsions were suddenly arrested, the patient recovered normal respiration, and very soon felt quite well. Two or three slighter attacks followed, which were soon arrested by properly instructed attendants. The effect of the compression was so remarkable that Dr. Roheim earnestly recommends this treatment. He compressed the carotid with the index and second finger between the larynx and sterno-cleido-mastoid muscle backwards towards the spine, just as Trousseau and Blaud had recommended. He was equally successful in the case of a girl nine years old. He considers the *rationale* of the treatment to be that by compressing the carotid and at the same time necessarily the sympathetic nerve fibres, which closely follow the course of the artery, the excitability of the brain is allayed.—*Lancet.*

THE TREATMENT OF PLEURITIC EXUDATIONS BY MASSAGE.

Dr. P. Poliakow reports 10 cases of primary pleuritic exudations, 7 serous and 3 serofibrinous, which were benefited by massage of the affected half of the thorax. The massage is conducted in the direction of the lymphatics, the strokes all converging toward the axillary space. The rubbings at first are slight, but must later be energetic. The sittings are daily, and last from 10 to 20 minutes. By this treatment exudations disappeared in from 8 to 20 days, whereas, the other symptoms of the disease lasted from 9 to 35 days longer. The action of massage of the thorax is that of a counter-irritant, which can be applied daily. The massage also relieves the thoracic pain, and increases the strength of the muscles, thus rendering the amplitude of thoracic movement greater, a condition which beneficially influences the absorption of the exudation and dilatation of the compressed lung.—*Wiener Med. Presse.*

THERAPEUSIS OF SYPHILIS.

Ehrmann (*Centrabl. f. die ges. Ther.*, December, 1891) gives a review of the more recent methods of treating syphilis. The efficiency of mercurial inunction depends among other things on the number of the follicles in the skin, and no greater effect is obtained by rubbing in a larger quantity of the ointment, unless over a greater extent of skin surface. Mercurial injections in exact dosage have the advantage of not depending on the patient for being carried out, and of the distinction of the general from the local effects. The disadvantages in using soluble mercurial salts for injection are that they pass through the body rapidly, and that they produce toxic effects more easily. The remains of the syphilitic poison are still present, and it may multiply so as to give rise to relapses. With inunction as well as with the injection of insoluble preparations a depot of mercury is left which is gradually absorbed. According to Lichtenstein, relapses are more frequent after the injection of partially soluble preparations such as the salicylate of mercury than after the more insoluble such as the oleum cinereum. With the latter the injection is made weekly, whereas with soluble preparations it must be made daily, and thus one advantage over inunction is lost. Great care must be taken in cleaning the needle. As to the duration of treatment the limit is generally put down as three years, but it cannot be named for all cases. The author mentions two years. If after two years a relapse occurs (a rare event in the author's experience) or marriage be thought of, an extra year must be thrown in. The object is to avoid rather than to treat relapses. If a relapse occur within a few weeks after the discontinuance of the first treatment (by injection or inunction) one may be obliged to give mercury internally. At the end of three months, whether relapse or not, pills of the protiodide are given. After 6 months the patient gets seven injections of oleum cinereum at intervals of from 5 to 8 days, or 20 to 25 inunctions. This is repeated at the end of the first year. If there is a relapse in the first half year—and this must always be treated—mercury is given at the end of the third quarter. In the second year the inunctions or injections are repeated twice. If internal treatment is adopted, seventy-five pills of the protiodide correspond to some four injections. Mercury taken by the mouth and absorbed into the portal circulation may be excreted with the bile, and thus the full effect is not obtained. The treatment inaugurated by Fournier is a considerable advance; and though it is not time yet for a statistical statement, nevertheless it is certainly known that hereditary syphilis and severe and early relapses are decidedly diminishing.—*Brit. Med. Jour.*

MASSAGE OF THE PROSTATE.

Dr. Eberman presents the following conclusions as to the value of massage in prostatic disease: 1. It can be advised (*a*) at the decline of an acute parenchymatous inflammation where there remains difficulty in urination, the gland being still slightly swollen, and but little painful; (*b*) when the acute or chronic inflammation terminates in abscess, the massage having for its object the evacuation of the pus, and the resorption of the engorgement still present; (*c*) in cases of chronic parenchymatous inflammation with swelling; (*d*) in soft hypertrophy with uniform consistence of the gland. 2. Partial hard myomatous hypertrophy of the gland is not susceptible of massage; however, the massage in this case does no harm, and it can be tried, first introducing a pewter bougie into the urethra. Perhaps if the resorption of the tumor is not effected, the urethra, which has been modified by the irregularities of the hypertrophied prostate, may be again restored to proper calibre. The middle lobe of the hypertrophied prostate encroaches upon the cavity of the bladder, and by reason of its situation cannot be subjected to massage.—*Wratch.*

MEDICINE.

INTESTINAL OBSTRUCTION BY A MASS OF ROUND WORMS.

Dr. Heydenreich reports a case of intestinal obstruction, in which the Nélaton's operation was performed in the left groin with successful results, and the artificial anus was afterwards completely and permanently closed by a novel autoplastic operation. The subject, a child 11 years of age, came under the notice of the author on the ninth day of a severe attack of obstruction. The case having been diagnosed as one of intussusception, the idea of performing laparotomy was not entertained, as it was thought that the adhesions between the layers of intestines would be too firm to permit of the invaginated portion being drawn out. The small intestine was opened in the left groin, and two days later a bulky mass, made up of seven round worms, presented itself at the artificial anus, and was extracted. The young patient quickly recovered from the attack of obstruction, and the artificial anus was subsequently closed. Blood was passed from the anus during the period of obstruction.—*British Medical Journal.*

PATHOGENESIS AND TREATMENT OF SCOLIOSIS.

Dr. L. H. Petit, of Paris, according to the *Mercredi Médicale,* September 30, 1891, thinks that scoliosis is due to some vice of nutrition that acts at the same time upon the three elements of articulation—upon the bones, ligaments, and muscles—beginning in arrest of development in some point of ossification in the body of the vertebræ. The primary cause of this condition is not rachitis. Subjects attacked with scoliosis are usually lithæmics, neuropathics. Among them, neurasthenia makes itself felt in all the joints, which show a generalized relaxation. If the spinal column seems to suffer oftener from deformity, it is simply because such an important deviation cannot possibly be overlooked. To lithæmia and neurasthenia is frequently joined mental overwork, bad habits of poise while studying or during play. Growth and the establishment of puberty are also a tax. Dilatation of the stomach is of frequent occurrence among lithæmics, neurasthenics, and those suffering from scoliosis. In itself, it is a potent cause of debility. Treatment, exclusive of local or mechanical measures, consists in remedying, as far as possible, this dilatation, the lithæmic state, the neurasthenia, and menstrual disturbances.

WOOLSORTER'S DISEASE.

In the *Arch. de Méd. Expérimentale,* August, 1891, S. Lodge gives an account of broncho-pulmonary charbon with five cases. In a short historical sketch attention is drawn to the diminution of the disease since 1884, when precautionary measures were enforced. A few cases are still seen, owing to the occupation sometimes being carried on in private and with neglect of precautions. The smell and irritant properties of the dust are well recognized. The following are among the symptoms: *Malaise,* bodily fatigue and somnolence, coryza and lachrymation, cough, at first dry then with expectoration containing anthrax bacilli, and difficulty in taking a deep breath. Palpitation, nausea, and vomiting may be present, and the author looks upon a feeling of constriction at the base of the chest as pathognomonic. Physical examination reveals a bilateral pleurisy with moderate effusion and also foci of bronchopneumonia. The urine contains albumen and sometimes even sugar. The temperature is never above normal. When fatal, the disease lasts about six days. If the patient's occupation be unknown the diagnosis may be difficult. The prognosis should be cautious. Attention is drawn in the morbid anatomy to œdema in the tissues of the neck and mediastinum. There is fluid in the pleural and pericardial sacs. Besides injection of the bronchial mucous membrane there are elevations of a deep red color. The organisms are mostly found in the submucous tissue and also in the broncho-pneumonic foci. The spleen is usually normal in size. Prophylactic measures consist in ventilation and burning the dust collected in the ventilators, in the disinfection of hands, and the use of special clothes. Eating in the workshop is forbidden. The diseased wool should also be disinfected by super-heated steam—a point not enjoined in the regulations.—*Brit. Med. Jour.*

OSSIFYING MYOSITIS.

Macdonald (*British Medical Journal,* August 29, 1891) reports the case of a girl, four years old, in whom at two years of age hard nodules developed in numerous muscles of the head, neck, upper extremities, and trunk, occasioning rigidity and interfering with the movements of the affected parts. No hereditary factors could be elicited. Treatment was of no avail. Portions of the indurated parts removed were constituted of bone, having fibrous attachments of origin and insertion.

SURGERY.

THE EXCISION OF CARBUNCLES.

Wölfler (*Centralblatt für Chirurgie*, No. 40, 1891) writes as follows: The slow healing of carbuncles after treatment by the usual method of deep incisions, the gangrene of the skin, and the danger of renewed infection of the adjacent parts, as well as the formation of a frequently disfiguring cicatrix, induced Riedel, since 1883, to excise at once in all cases. For this purpose a circular incision is made around the infiltrated parts. This is followed by radiating incisions, starting from the periphery of the previous one, and perpendicular to it, in the direction of the sound tissue. The carbuncle itself is not incised. In this way, at least four skin-flaps are formed. These are cleared of inflammatory products. Once beyond the area of infiltration, the knife must be carried down to the fascia of the muscles and the whole of the morbid tissue removed, to bring the operation to an end. There is frequently very free bleeding, which is arrested by pressure and plugging. On the evening following the operation, the temperature tends to become normal; on the following day, the skin-flaps are brought nearer together. The central solution of continuity allows escape of secretions. Riedel praises this method for the following reasons: 1. A harmless loss of skin and subcutaneous tissue gets rid of a dangerous focus of inflammation. 2. The excision brings the local morbid processes to an end at once, and, consequently, all danger of general infection is removed. 3. The loss of sound tissue is small. 4. The healing is rapid. 5. The cicatrix is good.—*The Provincial Medical Journal*, December 1, 1891, p. 751.

INTRAPERITONEAL HÆMORRHAGES

Dr. Veit (Volkmann's *Samml. Klin. Vortr.*) discusses the question, why in some cases these hæmorrhages are arrested spontaneously, while in others this does not happen, and death ensues. The most frequent cause of intraperitoneal hæmorrhage is ruptured tubal pregnancy. The author's experience demonstrates that coagulation of blood takes place in the abdominal cavity, but more slowly than in other parts of the body. The action of pressure in arresting the bleeding cannot be relied upon, owing to the absence of counter-pressure in the abdominal cavity. The conditions for effective contraction of the vessels are also wanting in tubal pregnancy. It follows, therefore, that unless adhesions exist which limit the effusion of blood and lead to formation of an hæmatocele, the hæmorrhage will not be spontaneously arrested. If it takes place in a previously healthy abdominal cavity, the case usually terminates fatally. In laparotomies for intraperitoneal hæmorrhage, elevation of the pelvis is of great advantage for controlling the hæmorrhage; ligation of the bleeding vessels, as well as the uterine and spermatic arteries is also required.

THE ENLARGED PROSTATE AND ITS OPERATIVE RELIEF.

Keyes contributes a valuable paper on this subject in the *New York Medical Review*, Oct. 31, 1891. Eleven cases are submitted. In case one, through a perineal incision, a phosphatic stone was removed, and a small third lobe twisted off. Voluntary urination returned and remained for several years. Case two, aged sixty-five. Perineal incision, an outstanding section of the right lobe was twisted off, with much relief, but not complete cure. Case three, aged sixty-six. Perineal incision, middle lobe incised in V-shape and twisted away; cured. Case four, aged sixty-five. Suprapubic section, small projecting lateral growth removed, and urethral opening scraped as free as possible; cured. Case five, aged seventy. Clear urine, no albumen or pus, suprapubic operation, middle lobe pinched off with the rongeur; death from suppression of urine. Case six, aged sixty-six. Suprapubic, prostate around urethra cut and scraped away; cured. Case seven, aged fifty-nine. Suprapubic, large stone and third lobe removed with snare; cured. Case eight, aged sixty-six. Small stones and third lobe removed; good recovery. Case nine, aged sixty-five. Horse-collar enlargement with third lobe removed with scissors and rongeur; good recovery. Case ten, aged sixty. Also suprapubic, small calculus and prostatic bar removed; patient improving. Case eleven, aged sixty-one. Stone removed and also part of prostate gland; sank and died on the fifteenth day. This was a serious case from the start. The following conclusions were presented: (1) Prostatectomy is justifiable, and does what nothing else can. (2) The perineal operation is moderately less severe, but decidedly less reliable than the suprapubic; it should rarely be preferred, unless there be urethral complications. In very feeble men it may still be elected. (3) The operation is not justifiable with present statistics if the patient can be comfortable in catheter life. (4) No physical condition of the patient, short of a practically moribund

state contra-indicates operation. By it, in desperate cases, life is often actually saved, although the operation is a grave one and its mortality high. (5) With the rongeur, better than any instrument, the bladder outlet can be lowered, and polypoid or interstitial growths jutting into the prostatic sinus can be removed, and these points are more essential to a successful operation than is the taking away of a large portion of the prostatic bulk. The instrument next in value is the curved scissors, but the skilled finger is the most important of all. Most of the work has to be done by the aid of touch, as the bleeding soon becomes free and renders visual inspection impossible. Diuretin, perhaps, is of value when the kidneys are damaged. It certainly does no harm. (6) Chloroform alone, in my opinion, should be used as an anæsthetic for the kidney's sake. —*Univ. Med. Mag.*

OBSTETRICS.

TRILOBED PLACENTA.

Tarnier (*Journal des Sages-Femmes*, October 1st, 1891) exhibited before his class a placenta of this kind from an ordinary labor. It consisted of three lobes of considerable size, not of one main placenta with two placentæ succenturiatæ. The cord, contrary to rule, was inserted into the largest of the lobes, and the vessels ran thence to the middle and smallest lobes. On closer inspection the vessels were seen to run from lobe to lobe across the tracks of membrane which separated them. A similar condition is seen in velamentous insertion of the cord where the vessels run first over the membranes before they reach the placenta. This trilobed placenta was of no pathological importance in the particular case where it occurred, but an anomaly of the same kind might prove very serious in other cases, especially as regards the danger of leaving a lobe behind in the uterus.—*Brit. Med. Jour.*

THE TREATMENT OF ABORTION.

The question of the rational treatment of abortion is still undecided, and Dr. Chazan considers that evil results are often due to the too exclusive spirit of the partisans of both methods. In cases of threatened abortion all agree that it is necessary to combat uterine contraction by rest, opiates and every means in our power; but when the death of the fetus has already taken place, and pain and hæmorrhage are present, some authors endorse immediate delivery, while others think the presence of a dead fetus in a closed uterus absolutely inoffensive, and rely upon the expectant method, unless active interference is positively indicated. Opinions as to the treatment of those cases in which the abortion is still in progress are quite as diverse; but Dr. Chazan would divide these patients into two classes—those who have pain without hæmorrhage, and those who have hæmorrhage with or without pain. The former class may be treated safely by the expectant method; and even when hæmorrhage is present, immediate evacuation of the uterus is not always indispensable, and is sometimes impossible on account of the absence of assistants and instruments. The tampon may then be found to fulfil all indications. It may not only arrest hæmorrhage, but on taking it away, all the membranes are often found in the enlarged cervical canal. Contrary to the opinion of Dührssen, the expulsion of the entre placenta is the rule and not the exception. But the tampon, in order to achieve this end, must fulfil the following conditions: Its asepsis must be perfect; it must arrest hæmorrhage and strengthen the pains. The first is easily attained by bathing the genitals and vagina with an antiseptic solution, and making the tampon of iodoform gauze, or cotton dipped in a 3 per cent. solution of carbolic acid. In multiparæ the tampon may not always arrest hæmorrhage, and we may then have recourse to the intracervical tampon, which is generally more efficacious than the colpeurynter. First fill the posterior *cul-de-sac*, and then the cervix. Tampons made of cotton must not be left in place more than 5 or 6 hours. When hæmorrhage continues after the abortion, the expectant treatment can lead to no result; but the decision as to when and how to interfere must depend upon the general state of the patient and the condition of the contents of the uterus.—*Gazette de Gynécologie*, November 1, 1891.

PROLAPSE OF PREGNANT UTERUS: "EXTRA-ABDOMINAL DELIVERY" AT TERM.

F. Stein (*Wein. Med. Blätter*, December 3d, 1891) was called in to a woman already several hours in labor. The midwives declared that labor was impeded by a great tumor growing from the vulva. The patient was a weakly dwarfish woman, about 22 years of age. She had already borne a child. Stein discovered a round mass as big as a child's head, which had descended out of the pelvis with its contents. The os was dilated, and the child's occiput presented. In fact, the greater part of the uterus, except the

fundus, has been forced out of the pelvis by the pains. At the end of two hours the child was delivered, slipping out of the uterus as though from a sac. The pains had been strong and regular throughout. All Stein could do was to support the uterus during the pains, lest it should protrude further or tear off from some of the important structures which serve as its ligaments. The child was well developed and living; it was born at term. The uterus was carefully replaced, with antiseptic precautions, after delivery. No evidence of malformed pelvis could be detected, the measurements being normal. After recovery the patient was able to return to work, a suitable pessary having been applied. Stein observes that it was most instructive to watch the progressive dilatation, gradual thinning, and ultimate effacement of the os as the pains progressed.—*Brit. Med. Jour.*

ACUTE OÖPHORITIS COMPLICATING PREGNANCY.

Three cases of this unusual condition are described by Coe (*American Gynecological Journal*, 1891, No. 9). In one, an exacerbation of a chronic oöphoritis followed overheating and sudden exposure to cold. Recovery ensued without the interruption of pregnancy.

In the second case, septic infection followed abortion, and a second pregnancy supervened. Ovarian abscess was diagnosticated, and stimulants were freely administered. A large quantity of pus appeared in the urine, although there was no evidence of cystitis. The patient's pain and temperature subsided. After gaining for some time, fever and sweats again appeared, when labor was induced. After the termination of pregnancy, the patient progressed steadily toward recovery, and ultimately became perfectly well.

The third patient was a multipara, who had had pelvic inflammation; at seven months of her pregnency she had a chill and fever, with pain over the right ovary. She recovered from this, and was well until her confinement. The third day after labor she had a chill and fever, and complained of pain in her right side. After intervals of gaining and losing, ovarian abscess was diagnosticated, and an incision was made over a mass in the pelvis. The diagnosis was correct, and the tube and ovary of one side were removed. The patient was much better afterward. Recovery followed in four weeks after the operation.

In writing of treatment, Coe advises a largely expectant method. Constipation is to be avoided, and hot applications may be used over the area of pain. Abdominal section is most successful when performed before the fifth month.

GYNÆCOLOGY.

PAPILLARY CYSTOMATA OF THE OVARY.

J. W. Williams, (*Bull, of Johns Hopkins' Hosp.*, December, 1891) disagrees with those authorities who trace this disease to Wolffian elements. Papillomata arise, he believes, in the Graafian follicles, in the germinal epithelium, or from ingrowths of the epithelium of the Fallopian tube into the stroma of the ovary, but this mode of origin is, in his opinion, not yet absolutely proven.—*Brit. Med. Jour.*

ENDOMETRITIS AND ACUTE INFECTIOUS DISEASES.

Massin (*Archiv. f. Gynak.*, vol. xl Part 1, 1891) examined the uterus in twelve cases of relapsing fever, two of pneumonia crouposa, two of typhoid fever, one of dysentery, and one of acute diffused peritonitis of uncertain origin. Not only was inflammation of the endometrium discovered, but the inflammatory process extended to the muscular tissue. There were hæmorrhages in the endometrium, very extensive in the cases of continued fever and mixed infection. Massin lays great stress on the fact, shown by his researches, that the uterus is actively involved in acute infectious diseases.

PELVIC MASSAGE.

Dührssen (*Berliner klin. Wochenschrift*, 1891, Nos. 44, 45, and 46) thus concludes an elaborate paper on Thure Brandt's method, in which he gives a detailed account of the treatment of eighteen cases: If endometritis is absent, the thorough application of massage will stretch or separate bands or adhesions. Organs which are fixed may be more quickly rendered movable by Schultze's method, practised under narcosis; massage should be employed subsequently in order to prevent the formation of fresh adhesions. Laparotomy is no longer justifiable in cases of retroflexion with fixation and chronic oöphoritis and peri-oöphoritis until massage has been thoroughly tried, provided that the trouble is not of gonorrhœal origin. Systematic elevation of the uterus is often sufficient to cure retroflexion. Parametric exudations which were formerly purulent foci are unsuitable for massage; ordinary exudations are generally quickly absorbed.

A NEW METHOD OF HYSTEROPEXIE.

Matlakowski (*Der Frauenarzt*, Hft. 9, 1891) recommends the following method, which he performed with success in three cases: A short incision is made in the linea alba one to two centimetres above the symphysis. The hand is introduced into the abdomen and the uterus raised. The round ligaments are then exposed on each side. Their peripheral portions are ligated and they are cut at about the distance of six centimetres from the uterus and the central end is grasped with a pair of forceps. The peritoneum, fascia, and recti muscles are perforated one to two centimetres to the side of the first incision, and the central portion of the ligaments drawn through these openings, the uterus being held in position; they are fastened to the anterior abdominal wall under the skin by a ligature. The primary incision is then closed and the operation is thus completed.

A CASE OF PUERPERAL PERITONITIS TREATED BY AMPUTATION OF THE UTERUS: RECOVERY.

Dr. A. Lapthorn Smith has reported in the *American Journal of Obstetrics*, January, 1892, the following interesting case: A woman delivered for the second time had an adherent placenta, which was removed piecemeal, with great difficulty, in the twelve hours succeeding delivery, partly by a midwife, partly by Dr. Smith. Forty hours later there was a chill, followed by high fever, although antiseptic injections had been used. Two days after labor a general peritonitis apparently developed. No attempt was made to further clean out the uterine cavity, but the abdomen was opened on the following day, and no evidence of peritonitis discovered. The uterus, as the seat of infection, was then removed, by the extraperitoneal plan, with pins and a nœud. In conclusion Dr. Smith advises:

(1) The temperature should be taken every day after every confinement, and, on the slightest rise, vaginal douches of permanganate solution should be commenced.

(2) If the temperature continues to rise, the douches should be made intrauterine.

(3) If there is no improvement at the end of twenty-four hours, scrape out the uterus with the finger or with the curette, apply strong tincture of iodine, wash out the uterus, and drain with iodoform gauze.

(4) If the case proceeds from bad to worse, and peritonitis sets in, perform exploratory incision, and if no other evident cause can be found remove the uterus.—*Univ. Med. Mag.*

ETIOLOGY AND THERAPY OF WEAK LABOR PAINS IN OLD PRIMIPARÆ.

Borner (*Der Frauenarzt*, Hft, 9, 1891) attributes the weak labor pains so often observed in old primiparæ to a beginning retrograde metamorphosis of the entire generative system. Absolute absence of pains in old primiparæ is to be considered the first indication of the approaching climacteric. The uterus of an old primipara has not the activity or physiological strength of one that has borne children. This the author considers the cause of tardy labors in these cases, and the reason why there is so much risk to both mother and child, requiring careful watching on the part of the physician, and often the use of forceps, turning, sometimes even perforation, or incisions into the portio vaginalis in cases where the os does not dilate sufficiently.

PÆDIATRICS.

THE NON-IDENTITY OF DIPHTHERIA AND THE SCARLET-FEVER DIPHTHERIA.

Heubner (*Jahrbuch für Kinderheilkunde*, xxxi., 1890, p. 56) maintains that there is a distinct difference between primary diphtheria and the diphtheria which occurs in connection with scarlet fever. In five cases of the latter disease he could not once find Loeffler's bacillus, which is generally regarded as the cause of primary diphtheria, while in cases of primary diphtheria he never failed to find the bacillus. Likewise, Kolisko and Paltauf did not find the Loeffler bacillus in cases of angina from diphtheritic scarlet fever.

As further proof that the two diseases are distinct he makes the following statements: In scarlet-fever diphtheria the tissue necrosis is not so marked as in primary diphtheria. Necrosis, and scarlet-fever diphtheria which begins with it, develop from the scarlet-fever angina in the latter part of the first week, and become clinically evident by the symptoms of septic infection, especially by swelling of the lymphatic glands, and by the course of the temperature; the gradual fall of the temperature from the fourth day does not take place, or the temperature again rises when necrosis develops. Moreover, scarlet-fever diphtheria, unlike primary diphtheria, very seldom results in laryngeal stenosis and diphtheritic paralysis.

A CASE OF SECOND ATTACK OF WHOOPING-COUGH.

The possibility of second attacks of pertussis is denied by Rillet, Barthez, and Bergeron. Westen, however, has recorded one case, Trousseau two, and Roger five. The most recent instance is contributed by Legendre (*Rev. mens. des Mal. de l' Enfance*, November, 1891), and constitutes the ninth case of the kind recorded. The patient was a young woman of twenty-five years, who had had pertussis at the age of ten years, at the same time that a sister and brother were affected. Fifteen years later the patient was brought to the author for a cough, which was regarded with suspicion because of the existence of tubercular disease of the lungs in several members of her family. Careful examination revealed no tubercular lesions; and the diagnosis was not made clear until, during a visit of the physician, the patient gave a most characteristic "kink." The girl was then found to have contracted this second attack from a child in the house suffering from severe whooping-cough.

ACUTE RHEUMATISM IN CHILDREN.

A. A. Kisel (*Med. Obozerenië*, No. 20, 1891) reviews a series of 38 cases of acute articular rheumatism observed in patients aged from 2 to 16. Not more than 16 out of the 38 patients complained of pain about joints; in the remaining cases some other symptoms (most frequently referable to the vascular system) were predominant. The author lays down the following general propositions: (1) Heredity plays a very important part in the causation of rheumatism in childhood. A careful inquiry into family antecedents rarely fails to elicit the fact that the child's parents are rheumatic subjects. (2) In children the course of rheumatism very seldom resembles that of an acute infectious disease. (3) Infantile rheumatism very commonly runs a latent course. (4) Cardiac complications occur more frequently, and are of a more severe type in children than in adults.—*Brit. Med. Jour.*

PURULENT VULVO-VAGINITIS IN LITTLE GIRLS.

Chaumier (*Poitu Medical*, October, 1891) calls attention to the purulent vulvo-vaginitis of little girls, which, according to certain authors, owes its origin to blennorrhagic infection. The writer holds that the disease may also be due to other causes, notwithstanding the presence in the discharge of the gonococcus of Neisser. The disorder is contagious, and is of more frequent occurrence in large cities than in the country. It always exhibits the same aspect, characterized by a thick purulent discharge, agglutination of the great lips, and retraction of the vulva and vagina, but without complicating the urethral canal. Vulvo-vaginitis is often accompanied with a slight feverish reaction, loss of appetite, frequent and painful urination, the pain being due solely to the passage of the liquid over inflamed parts. In a case related by the author the disease was complicated by an arthritis of the knee-joint. If the malady is left to itself it may last a long time, but under proper treatment it will generally yield in from two to two and a half months. The treatment consists in the external applications of lotions and in the vaginal injections of corrosive sublimate.

HYGIENE.

PHYSIOLOGICAL RELATION OF ALCOHOL TO FOOD.

Dr. W. H. Porter (*Med Record*) says: Three classes of proximate principles are necessary to maintain life, and must be supplied as food-stuffs.

That the term food-stuff should be limited to those substances which contain at least one element from each of these three classes in its composition, viz,, an inorganic, a CHO, and a CHNOS element.

That the first act mechanically, the second as non-nutritive stimulants, and the third as true nutritive elements which enter into the essential construction of all the tissues and glands of the body.

That the use of the second class or CHO compounds—including alcohol—when taken in excess of the absolute demands of nature, all tend to overtax the oxygenating capacity of the system and prevent a complete oxidation of the proteids or CHNOS bodies.

That this continued over-stimulation and the half-starved condition arising through this excessive use of the CHO or non-nutritive and alcohol-forming compound, tend most decidedly to weaken the vital forces, develop diseased conditions, and create the habit on the part of the system to take to alcoholic stimulation.

That alcohol *per se* is no more poisonous than fat, sugar, and starch, but they are all factors in depriving the system of its full quota of oxygen to act upon the proteids, and from this incomplete transformation of the latter or CHNOS elements, nutrition is impaired and an almost unlimited number of toxic bodies produced.

That alcohol and the chemical elements which enter into its atomic construction, and the transformation they undergo in passing through the system, and the final products eliminated from the body, are practically the same as follow upon the introduction of fat, sugar and starch.

That alcohol should only be classed as a medicinal agent, and never be used in health as a common article of food.

That to combat most satisfactorily and successfully the alcoholic habit, the proteids or CHNOS food-elements should be the principal substances used, and the CHO compounds of all kinds should be avoided as much as possible.

That there is a common tendency to feed improperly the animal economy from infancy to the grave, and to this false habit all the ills of the human race are largely traceable, and in it we find the chief factor in producing and maintaining the alcoholic habit.

DUST AND DUSTINGS.

"It is our littleness that sees no greatness in a trifle." This is true if success is a multiple of careful details. It is true, therefore, of perfection in every art and work, even the commonest, and among such a contemporary has assigned a place to the seemingly menial art of dusting. For, as he says truly enough, there is an art in dusting, and it is one which on every ground deserves far more studious cultivation than it usually receives. Different observers have from time to time described the components of ordinary dust, and these, it is needless to say, exhibit special characters in almost endless variety. Mineral matters, animal and vegetable débris, morbid germs—whatever, in fact, is light enough and small enough to remain for a time suspended in air, come under this common and generic but far from harmless term. The spread of cholera and exanthematous diseases has, no doubt with perfect truth, been attributed to its influence. It is clear, then, that the method to be employed for its removal is a matter of some importance. As regards this, we need hardly discuss every suggestion of housewifery. Some would pin their faith, not without reason, to the damp duster rather than the dry one, but this will not suffice in itself, and, moreover, every kind of furniture does not bear such treatment. Where possible, of course, it is of the two the more effectual plan. Above all, however, it is needful to remember that the object aimed at is not displacement of dust only, but its removal, and for this purpose a combination of thorough daily ventilation by open doors and windows, with careful sweeping, followed by at least displacement of any dust still remaining with a cloth, is the only method alike feasible and effective. All over-crowding with furniture or with woven fabrics is to be avoided. Bed curtains and valances are no less objectionable, and bare floors are more wholesome than the choicest carpet. Nowhere is care in these particulers more justified or more imperative than in the crowded homes of the poor. Let us but mention one other point—the healthy effect of sunlight. It is now admitted that some disease germs lose their power on exposure to light. In this fact we have a standing protest against the custom of darkening rooms with lowered blinds, or that æsthetic error which covers the window space with crossed curtains.—*Lancet.*

AN ATTEMPT TO RENDER TOBACCO HARMLESS.

Smokers may be pleased to learn that Dr. Gautrelet, of Vinchy, claims to have discovered a method of rendering tobacco harmless to mouth, heart and nerves, without detriment to its aroma. According to him, a piece of cotton wool steeped in a solution (five to ten per cent.) of pyrogallic acid, inserted in the pipe or cigar-holder, will neutralize any possible effects of the nicotine. In this way not only may the generally admitted evils of smoking be prevented, but cirrhosis of the liver, which in Dr. Gautrelet's experience is sometimes caused by tobacco, and such lighter penalties of over-indulgence as headache and furring of the tongue, may be avoided. Citric acid, which was recommended by Vigier for the same purpose, has the serious disadvantage of spoiling the taste of the tobacco.—*Science.*

SAFE QUININE.

(LEVI.)

The troublesome buzzing of the head which follows the administration of large doses of quinine is stated by Dr. Levi, a Central American physician, to be averted by the following combination:

Quinine sulphate	gr. lx.
Pepsin	" lx.
Capsicum	" vj.
Ginger	" xij.
Sodium bicarbonate	" lx.

Mix, and divide into twelve powders.

One of these powders is the dose for neuralgia, but more or less of the combination may be taken according to the nature of the disease. In rare cases quinine causes vomiting and purging symptoms, which are averted, says the *Satellite*, by Dr. Levi's prescription.

MEDICAL CHEMISTRY.

THE ANALYSIS OF RUSSIAN BREAD.

According to *Reuter*, the Russian papers of last Monday published the official analysis of the adulterated flour recently bought by the Municipality of St. Petersburg city. The result would appear to show that it was not adulterated to such an extent as the *Novoe Vremya* announced some days ago. While this statement appears in a negative form, yet the fact that it is qualified by the sentence "to such an extent" does obviously indicate a certain amount of adulteration. The exact details of an analysis of Russian bread carried out in our laboratory appeared in our columns last week, and the results showed an adulteration, even in this specimen which was regarded as unusually good, equal to the addition of ten pounds of foreign substances to every hundredweight of flour. Our report was read with very general interest, inasmuch as it demonstrated distinctly that the flour had been tampered with, not, perhaps, to an excessive extent, as has been believed, but still to an extent which is both unpardonable and unjustifiable. In respect to the results, it is so far satisfactory to learn that our report is practically confirmed by the Russian official analysis, although the *Novoe Vremya* maintains that the official analysis is misleading, and it cites the opinion of several experts in support of this contention.—*Lancet.*

DETECTION OF MORPHINE IN THE URINE.

A paper by Professor Theodore G. Wormley, of the Pennsylvania University, on the recovery of absorbed morphine from the urine, the blood, and the tissues, has recently appeared in the *Chemical News*. The paper, which appeared in several issues, is much too long to attempt to abstract, but the gist of it is given in the following general considerations: In the use of amyl alcohol for the extraction of morphine from the urine, the urea taken up with the morphine interferes more or less with the purification of the alkaloid. In a residue consisting of a mixture of this kind, the urea, as such, may, as we have found, be decomposed by heating the mixture in an air oven for a few hours at 135° C., without any appreciable loss of the morphine.

But the presence of the products of the decomposition of the urea prove about as objectionable as that of the urea itself. Since urea is freely soluble in water, whilst morphine is only sparingly soluble, it might be inferred that those substances could thus be readily separated.

This is true in regard to pure mixtures, and also when the morphine has assumed the crystalline state; but when present in only minute quantity, the alkaloid seems to be so closely adherent with the urea and coloring matter that these substances are largely dissolved together. Experiments made in regard to the adaptability of isobutyl alcohol for the extraction of morphine from complex mixtures, especially from the urine, show that on treating excess of finely powdered morphine with the hot alcohol and allowing the mixture to stand sixteen hours, it was found that 1 part of morphine was held in solution by 110 parts by weight of the alcohol. Under the same conditions, 1 part of urea was retained in solution by 49.8 parts by weight of the alcohol. It would thus appear that morphine, while rather freely soluble in isobutyl alcohol, is slightly less soluble in this liquid than in amyl alcohol; whereas urea, on the other hand, is somewhat more freely soluble in isobutyl alcohol than in amyl alcohol.—After *Chem. and Drug.*

IODO-NAPHTHOL.

M. Braille, describes a compound of iodine with *b*-naphthol (*Union Phar.*) It is stated to be prepared by mixing an aqueous solution of 24 grams of iodine and 27 grams of potassium iodide with an aqueous solution of 110 grams of *b*-naphthol and 40 grams of caustic soda, and adding to the mixture gradually a solution of sodium hypochlorite corresponding to ten times its volume of chlorine. The iodo-naphthol is precipitated as a greenish-yellow powder, which is collected and washed several times with water and dried in the dark. When exposed to the light, the greenish color becomes intensified rapidly. The product is said to be odorless and tasteless, insoluble in water, almost insoluble in alcohol and acetic acid, partially insoluble in ether and very soluble in chloroform.

ALTERATIVE.

Dr. Fyke, in the *Courier of Medecine* claims the following to be an excellent prescription in all wasting diseases:

℞

Hydrarg. bichlor.	grs. i,
Lib. arsen. chlor.	ʒ ii.
Tr. ferri. chlor.,	
Acidi hydrochl. dil.	āā ʒ ss.
Syr. limonis	ʒ ii.
Aquæ dest.	q. s. ad ʒ vi

M. To adults a teaspoonful every four hours.

NEWS AND MISCELLANY.

A. C. E.

In the famous old a c. e. mixture,
Both ether and chloroform stay;
But neither of these is a fixture,
As a safe anæsthetic to-day.
Some countries are partial to neither,
Tho' England gives chloroform sway;
"How happy could I be with *ether*,
Were t'other dear charmer way."

L. Lewis.

THE PHYSICIAN.

The following is the translation of an epigram written by Cordus in the sixteenth century:

The Physician like an angel seems
When he in the sick room brightly beams,
And like unto a god is he
When he's removed the malady.
But in a different light we view
The doctor when his bill is due;
Our alter'd eyes we at him level
As though he were the very devil.

Dr. Carl, in Med. Brief.

PROPRIETARY REMEDIES.

Thirty years ago Great Britain derived from patent medicines a revenue of $210,000. The same tax now yields $98,500,000 a year. All this increase is at the expense of the gulled public; the honest apothecary and the doctor being large losers.

INTERNATIONAL GYNÆCOLOGICAL AND OBSTETRICAL CONGRESS.

Dr. Jacobs, General Secretary to the Congrès Périodique International de Gynécologie et d'Obstétrique, which will hold its first meeting at Brussels in September, announces that the following subjects have been chosen for special discussion: (1) Pelvic Suppurations, to be opened by M. Segond, of Paris; (2) Extrauterine Pregnancy, by Dr. A. Martin, of Berlin; (3) Placenta Prævia, by Dr. Berry Hart, of Edinburgh.

INSANITY AN EXCUSE FOR ADULTERY.

A curious medico-legal point was raised in a suit tried a few days since in the Divorce Court. The action was brought by the husband, and the adultery of the respondent was admitted, she having herself taken the trouble to communicate the fact by letter. There was, however, evidence to show that she had left the conjugal domicile under the influence of delusions, and her insanity was virtually established. It was therefore urged on her behalf that under these circumstances she was not legally responsible for her actions. The judges held, however, that though insane she had retained sufficient mental capacity to be aware of the nature and consequences of her actions, and on this ground the divorce was accorded. So far so good, but from a medical point of view, it were much to be desired that mental alienation *per se* should be admitted as a reason for divorce. Even if the demented wife should subsequently recover her reason, it is eminently undesirable that she should regain the right to reproduce and thus to perpetuate the morbid strain. Our divorce laws were based on social and moral considerations, the still small voice of the physiologist not having made itself heard. Pathological, like criminal proclivities entailing the loss of the civil status, ought to be recognized as unfitting their possessor for the conjugal relationship. It is fully as important to the community to prevent the multiplication of the insane or the mentally unstable as to check the manufacture of juvenile criminals. Unfortunately, the authorities who show the greatest solicitude to preserve the breed of horses from contamination display a very manifest reluctance to protect the human race from similar contamination. Perhaps, with the march of intellect, public opinion may by-and-by be educated up to the point of agitating for the enforcement of physiological laws.—*Med. Press.*

DURATION OF LIFE OF VARIOUS ANIMALS.

The *Scientific American* give the following estimates of the duration of the life of various animals: Elephants, 100 years and upward, rhinoceros, 20; camel, 100; lion, 25 to 70; tigers, leopards, jaguars, and hyenas, (in confinement) about 25; beaver, 50; deer, 20; wolf, 20; fox, 14 to 16; llamas, 15; chamois, 25; monkeys and baboons, 16 to 18; hare, 8; squirrel, 7; rabbit, 7; swine, 25; stag, under 50; horse, 30; ass, 30; sheep, under 10; cow, 20; ox, 30; swans, parrots, and ravens, 200; eagle, 100; geese, 80; hens and pigeons, 10 to 16; hawk, 30 to 40; crane, 24; blackbird, 10 to 12; peacock, 20; pelican, 40 to 50; thrush, 8 to 10; wren, 2 to 8; nightingale, 15; blackcap, 15; linnet, 14 to 23; goldfinch, 20 to 14; redbreast, 10 to 12; skylark, 10 to 30; titlark, 5 to 6; chaffinch, 20 to 24; starling, 10 to 12; carp, 70 to 150; pike, 30 to 40: salmon, 16; codfish, 14 to 17; eel, 10; crocodile, 100; tortoise, 100 to 200; whale, estimated, 1,000; queen bees live 4 years; drones, 4 months; worker bees, 6 months.

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THE
MEDICAL AND SURGICAL REPORTER.

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CLINICAL LECTURES.

THE RADICAL CURE OF NON-CONGENITAL INGUINAL HERNIA.

By PROFESSOR PRENGRUEBER.*
PARIS, FRANCE.

Gentlemen:—I am about to operate before you upon this patient, a man 55 years old, who is suffering from an inguinal hernia in the left groin. This hernia is of about ten years standing, it developed slowly and progressively. Actually its weight, if isolated, would be about two pounds. It can be easily and completely reduced. After its reduction has been effected, one is struck with the considerable dilatation of the inguinal canal. In truth, the canal has entirely disappeared, and nothing is left but a large orifice which is a fusion of the internal and external orifices, without any intervening passage. On examination of the right side, we see that here the inguinal canal is also greatly dilated, and at its opening there are also slight evidences of hernia.

This extreme dilatation of the orifices of both inguinal canals is, I believe, the reason our patient has suffered so much from hernia. In this case there are actually no traces of any adhesions, and the hernia is completely and easily reducible. Before proceeding to undertake the radical cure of this case, which naturally involves an operation, we must have decided indications which will fully justify our taking such a step in a patient of the comparatively advanced age of fifty-five. Our indications, which fully warrant the performance of the operation are the following: Although the reduction of the hernia is easily accomplished, its retention in place is most difficult and troublesome owing to the size of the inguinal orifice. The patient has resorted to many styles of trusses, but all are either incapable of retaining the hernia in place or else cannot be tolerated by the patient. The hernia invariably, upon the slightest exertion on the part of the patient, will fall above or below the pad of the truss. The various experiments result in the production of intestinal irritation, or else inflammation, sufficiently violent and menacing to justify the performance of the operation for the radical cure of the hernia. Thanks to the size of the inguinal ring there has been no strangulation in the case, but it is very likely that this complication might occur at any time, necessitating an immediate surgical interference under circumstances much less favorable, and far more dangerous than those existing at present.

This question of the justifiability and value of the radical cure for hernia, has, as you know, excited a vast amount of controversy among surgeons. After the attempts made by surgeons of the last century to perfect this operation, the results they have obtained caused the procedure to fall into disrepute in the beginning of this century. This disfavor was entirely justifiable, since it was then impossible to prevent accidental traumatic infection, but with our present knowledge of antisepsis the operation is rendered quite inoffensive, although very possibly capable of considerable improvement. All the same, as had been said, the subject is still one of controversy among surgeons: First, in regard to the adequate indications for its performance; second, in regard to the efficacy of the operation itself.

Concerning the indications for the radical cure, one is to-day indisputable, that is for strangulated hernia. In the operations for strangulated hernia the "radical cure" is embraced in the final step of the operation. The intestine having been reduced, it is necessary to resect the hernial sac. Without in any way adding to the dangers of the first step in the operation for strangulated hernia, its conclusion by the resection of the sac will only tend to lessen the dangers of an ultimate relapse. Finally, in case of a relapse

*Delivered at the *Hôspital St. Louis*, Paris; translated from *Le Bulletin Médical*.

the hernia will be more easily held in place and better tolerated.

The indications for the operation in cases of irreducible herniæ are to my mind equally forcible. A hernia of this kind is a source of constant pain and perpetual menace to the patient. Trusses are not tolerated, and even specially designed apparatus gives but a poor sort of satisfaction. The radical cure will at least transform the irreducible hernia into a reducible one, which can be retained by a very simple truss, and this alone is surely a decided gain.

Regarding the operative difficulties in such cases, I would say that the irreducibility of these herniæ may be due to either of two different causes: There may be adhesions of the intestine to the hernial sac, or else the presence of the epiploon or omentum in the sac may constitute the obstacle hindering the reduction, either by reason of adhesions or else by reason of its volume. It is not rare, in fact, for the omentum to become tumefied or swollen, and to become chronically inflamed while incarcerated in the hernial sac, forming a sort of stopper or cork in the inguinal ring which will prevent reduction. The operative technique, as well as other difficulties, will vary with indications of this or that case.

A third order of indications, and one which has been freely discussed and disputed, is, as in the case of our patient, a difficulty in keeping the hernia in place. In order to be justified in operating upon this class of cases, it is evident that the reality of this difficulty must be fully established, and that the various styles of suitable trusses have been conscientiously tried. If this has been done, we are surely justified in not leaving the patient menaced by constant suffering, and the possible accidents of rupture or strangulation.

But before deciding upon a surgical interference the general condition of the patient should be most carefully inquired into. As I have already said, the age of our patient (fifty-five years) has caused some hesitancy on my part, and I would not have concluded to operate had the patient not been robust, active, and well kept. In case, however, the patient were feeble, poorly nourished, or had any suspicion of pulmonary trouble, I would refuse to operate. Even in a case of irreducible hernia, were the patient's condition bad, we would be justified in confining the operation to a simple kelotomy without attempting the radical cure. In patients of advanced age, simple kelotomy constitutes a grave procedure, and any prolongation of the operation should be rejected.

These constitute the indications and contra-indications for the radical cure of hernia. What at present constitutes the dangers and the results of the procedure?

The operative dangers, in a suitable case, and when the operation is conducted with antiseptic precautions, may be regarded as nil. I, for my part, have performed the operation nearly fifty times, and my statistics, as also those of other antiseptic surgeons, show no death. I only once had an accident, which very fortunately was not serious, but which I will refer to in order to show you the importance of maintaining strict asepsis.

The patient in question was operated upon by me in the Hôtel-Dieu, and an abscess formed on the fifth day at the neck of the sac. The catgut employed as the ligature had evidently been improperly sterilized and had acted as the exciting cause for this infection. It would, you will therefore see, gentlemen, be useless for you to attempt the operation for the radical cure of hernia, did you not fully comply with all the requirements of strict asepsis.

Regarding the therapeutic results which one may hope for, it will first be necessary to distinguish two different operative conditions.

Among herniæ, one variety, as you know, is produced by force, strain or rupture, and occurs in patients, with strong abdominal walls, but whose vocation in life compels repeated and violent exertions, these would include butchers and bakers for instance. These may be classed as accidental herniæ. The second variety of herniæ comprises those resulting from feebleness, or constitutional herniæ. These are the herniæ met with among aged and debilitated subjects. There exists but slight resistance of the abdominal wall. When speaking of the ultimate results of this operation for radical cure, I also add to this last group congenital herniæ, caused by malformation, a veritable defect in the abdominal wall.

The herniæ of force promise the best results after the operation for radical cure. The recovery is complete, and it is lasting. Two cases of this kind come to my mind, both of which I operated upon over two years ago. In both the cicatrices remained firm and solid, and in spite of the most fatiguing and continued labor on the part of the subjects, there has been no evidence of recurrence of the herniæ. I still advise them to wear a truss, but more as a precaution than a necessity. In one of these cases the hernia was very voluminous, and I was only able to reduce it after the most difficult and laborious operation of the kind that it has yet been my

lot to perform. In the other subject, the continued strain which his occupation has compelled him to work under since the operation has been sufficiently violent to give rise to a hernia on the side not operated upon, while the old hernia has given no evidence of reappearing. These results are very satisfactory.

The herniæ of feebleness, on the contrary, will only result in moderate success when treated by the radical cure. In these cases one may be able to suppress the hernia, but its cause itself, the predisposition caused by the feebleness of the abdominal walls, remains after the operation has been apparently sucessfully completed.

The least successful case that I ever operated upon was that of a child four years old. The hernia was congenital, and returned four months after the operation, as large at it had been at first. But the subject was very feeble, and subsequently died of tuberculosis.

The technique of the operation for the radical cure is simple enough. While maintaining strict asepsis, I do not insist upon all the technical minutiæ, but am satisfied with knowing that the patient's parts to be operated upon, instruments, operator, and assistants are clean. The incision is made cautiously, line by line, until the sac is reached. The laying bare of the sac will be found especially difficult if at the moment of incision the hernia slips back into the abdomen. To avoid this make the patient cough so as to bring the hernia down before administering ether, and avoid the slightest attempt at a reduction.

The sac, when opened to the view of the operation is incised, and we may be able to see the contents of the hernia, whether it be a loop of intestine or a portion of the omentum.

The intestine, if it is non-adherent, can be reduced with the greatest ease, and even if there exist slight adhesions of the intestine to the sac, these may also be easily liberated and the intestine reduced. But the case is quite different if there are old firm adhesions. In such an event the greatest care must be taken in liberating the intestines from the sac, and especially the peritoneal portion of the omentum if involved. These firm intestinal adhesions are, very fortunately, rarely met with. I can only remember one such in all my experience.

The omentum is nearly always adherent, but its liberation is fortunately far less dangerous than that of the intestines. But when liberated it should be resected and not returned to the abdominal cavity. It is advisable to resect as much of the epiploon or omentum as possible, and to accomplish this the omentum should be pulled gently forward, exposing a portion of the intra-abdominal part. If too little of the omentum is excised, the remaining part will not be well drawn up into the abdomen and this may cause an ultimate return of the trouble. If you reduce the omentum and do not excise any portion of it, the chances of its pressure upon the opening of the inguinal orifice causing a relapse, are very large.

After the omentum has been resected the intestines are reduced, a sponge placed in the inguinal orifice, and the resection of the sac is undertaken. This should also be done as high up as possible.

Nothing further remains to be done but to insert a row of superficial sutures in the skin, and one or two deep ones. I would caution you not to forget the use of a drainage tube, as it is of considerable advantage in obviating any danger of septic infection. The wound is then dressed with iodoform and a bandage applied.

The patient before the class was then etherized and the operation begun, and conducted as described. There were no intestinal adhesions or other complications. The patient made good recovery from the effects of the operation, which lasted but fifteen minutes.

HEMIPLEGIA.

By PROF. CHARLES CARY, M. D.
BUFFALO GENERAL HOSPITAL—MEDICAL CLINIC.

This patient, aged twenty-eight, was brought into the hospital six days ago by the Fitch ambulance, with the history of having been stricken with paralysis on the street. He was found aphasic, with right hemiplegia and facial paralysis. He could feel a pin prick in this side. He could swallow with difficulty, and the tongue could not be protruded. The evacuations of urine and fæces were involuntary.

So far as the previous history is concerned, we can learn nothing. We must determine the anatomical lesions, and the condition resulting, entirely from our own observations. Although the patient can tell us nothing of his condition, you will notice as we go through the examination that he is more or less conscious and capable of understanding us to some extent. His mind has cleared up a little since he first entered, when he was inclined to stupor, but not to such a degree as to constitute coma. When I hold his

nose to force him to open his mouth, you will observe that the movement of the lips is only upon the left side. He shuts his eyes, the left completely, the right only partially; the superior branches of the facial nerve being seldom affected to the degree that the lower ones are. When I ask him to protrude the tongue, he evidently understands me and makes an effort to do it which is partially successful, but the tongue is tilted to the paralyzed side. This is due to paralysis of the hypoglossal nerve. There is no motor nor sensory disturbance of the left side.

The patient's hands are hard and he is evidently a man used to manual labor, but he has not the appearance of having been a drinking man, and he has neither the age nor the build which we usually associate with apoplexy. The right hand is a trifle more puffy than the left, and it has an inactive look. On asking him to hold up his right arm, he tries to respond, and assures me by his expression that he can not do it. There is at present a scaly eruption over the right forearm, and a day or two ago it had quite a papular appearance. This is not at all uncommon in cerebral hæmorrhage, and is due to a trophic disturbance. When I first saw him there was profuse sweating of the entire right side, and attended vaso-motor dilatation. There is no question but that his sensations, if not absolutely normal, are but slightly disturbed in the right side. The mild œdema seen here, and which is often found shortly after paralysis, can be explained in this way. The venous return from the extremities is largely due to muscular contraction. If you should hold your arm in the same position for forty-eight hours the lines would be more or less obliterated on account of a very slight œdema a dropsical effusion all through the muscles, and particularly in the subcutaneous cellular tissue. This is due, therefore, in paralysis, not entirely to vaso-motor disturbances, but perhaps even more to the inactivity of the muscles.

When the patient first came in, tickling his right foot would cause it to be removed. On tickling the right foot now, the response is more in the left foot. The former movement was purely reflex—an involuntary, spinal action of a protective nature. The present reflex has more the nature of a conscious effort to drive away the irritating cause. When there is no sensation, tickling of the foot will usually induce quite complete movement of the leg. There is now a certain resistance as I move the paralyzed leg; and this is not uncommon in recent paralysis. It is of the same reflex nature as the attempted withdrawal from the finger on tickling the foot. The patellar reflex is usually rather exaggerated after paralysis, but here it is apparently much reduced. The reflex, however, is equally slight on the normal side.

When the patient was first brought in, his breathing and heart-action were very slow, the slowness being undoubtedly due to the shock he had received at the time of the vascular rupture. The first sound of the heart is normal, sharp possibly, and a trifle prolonged, but without murmur. With the second sound, there is a dragging murmur, not a bellows murmur in any sense, but almost such a sound as you would get from dragging the foot over the floor. I do not know but that it is an uncertain and irregular closing of the aortic valves. It seems a little too distant to be a friction sound. I am not inclined to consider it a regurgitant murmur, for if the patient had had a long continued aortic insufficiency, he would have quite a degree of cardiac hypertrophy or dilation which is not indicated by the point of the apex impulse nor by the area of cardiac dullness. Acknowledging at the outset that the determination of this man's cardiac lesion has not been effected, I wish to wait before stating how far the cerebral lesion depends upon that in the heart. I am inclined to think that he has had a minute aneurism of one of the cerebral arteries, and I take this view because this is the most common cause of cerebral hæmorrhage. I imagine that during some temporary excitement or exertion the force of the heart ruptured this aneurism and poured out a mass of blood which caused the paralysis.

As to the location of the rupture, all evidence places it upon the left side of the brain, either in the cortex or more probably in the neighborhood of the lateral ventricle, that being the locality where the vessels are most numerous and where rupture most commonly occurs. The amount of blood poured out, we cannot determine; sometimes a small clot will produce all the symptoms which we note here, and again a large clot may occasion comparatively slight results.

As to the outcome, I should expect this man to improve and rather rapidly, but I question very much whether he will recover completely for the reason that the arterial disease, the arteritis, which is the probable cause of this aneurism which, we have supposed, has ruptured, makes it probable that under similar circumstances of increased excitement or exertion and consequently heightened arterial tension, and particularly as

age advances, rupture may again occur, not necessarily in the same place, but in some other part of the brain.

The patient has presented no symptoms requiring immediate relief. In any case of paralysis, attention must be given to the condition of the bladder and the bowels so as not to allow retention of urine and fæces. This man has incontinence and not retention. If he had a high bounding pulse with great hypertrophy of the heart, I should have thought blood-letting of service. This, however, is rarely resorted to of late years. Five or six years ago, I bled a man and to the best of my knowledge the operation has not been done in this hospital since. This case I saw very early, the arterial tension was high and I believed the hæmorrhage in the brain to be still in progress. Elevation of the head, cold applications to the head and stimulation of the bowels to draw blood from the upper portion of the trunk and head, would in most cases be about as effective as venesection. I prefer saline cathartics, but it is the custom with many to use a more irritating cathartic, such as croton oil. For the time being, this patient is simply being watched and he is recovering, as such patients generally do unless they die from the first shock, which is not an uncommon thing. In the course of the next five or six days, we shall institute a plan of treatment which will, perhaps, render some relief. I say *perhaps* for the action of our remedies, especially in cases of hemiplegia, is not always satisfactory. I shall put him upon potassium iodide for several reasons. In the first place, because the alkali which it contains is rather good to reduce arterial tension; the iodine promotes absorption as much as any agent that can be used for that purpose, and the blood clot in this patient's brain can be removed only in this way. Again, the cause of miliary aneurism is very commonly endarteritis of syphilitic origin. It would be difficult for me to suggest why a man of this age, with such apparently good health, should have cerebral aneurism even of small size except as the result of syphilis. Do not think of miliary aneurisms as being as big as beans or peas even. They are extremely minute dilatations of small arterioles. This man has been carefully examined for syphilitic markings without finding any. Miliary aneurisms, however, are often due to the rheumatic taint and potassium iodide is as good for a suppressed form of rheumatism as any remedy that can be used. After a few days, in order to prevent degeneration of the muscles, we will undertake massage and passive motion of all the joints, and especially making complete extension, for even now I notice that the flexor muscles are beginning to gain the ascendency over the extensors, and if a contracture once occurs it can never be fully overcome.

COMMUNICATIONS.

A DISCUSSION ON PHAGOCYTOSIS AND IMMUNITY *

At the Pathological Society of London, March 1st, 1892.

The discussion on Phagocytosis and Immunity, which was adjourned from the last meeting, was resumed (Sir GEORGE MURRAY HUMPHRY, F.R.S., President in the chair) by

V.—J. SYER BRISTOWE, M. D., F. R. S.,

Senior Physician and Joint Lecturer on Medicine in St. Thomas's Hospital.

Dr. Bristowe approached the subject from a clinical point of view; he showed that the resistance of the body to the invasion of infective diseases was provided for in various ways: (*a*) mechanical, as the opposition of the skin and mucous membranes; (*b*) by inflammation with subsequent encapsulization or suppuration; (*c*) by active warfare or phagocytosis; (*d*) by unfitness of soil, etc. With regard to (*c*), he agreed with Dr. Burdon Sanderson's position as stated at the last meeting. Should the infective principle succeed in getting past these first barriers, they would enter the system along the blood vessels, or more commonly along the lymphatics as far as the first group of glands. He thought that cure occurred by the infective principle getting beaten at the mucous membrane or at the lymphatic glands; but these modes of spontaneous cure would not include the cure of the exanthemata after their generalization; and it was in these cases especially that immunity most frequently arose.

He then contrasted various types of infectious diseases, taking tubercle, diphtheria, and typhoid and small-pox as types of the different varieties. Local skin tubercle or lupus, instead of producing general tuberculosis, seemed to prevent it. In diphtheria and typhoid the chief symptoms were associated with the local lesions rather than with the generalized poison, which as a rule produced its effects after the subsidence of the local lesions. With small-pox and the other exanthemata the conditions were wholly different. Taking

*Continued from last issue of the REPORTER.

inoculated small-pox as an example, the poison appeared to be developed for nine days, with formation of the pustule and enlargement of neighboring glands; then the generalized condition set in, with eruption on the third day. Immunity seemed to be acquired in the earlier stage of the disease, as it was remarkable that whilst the pocks were developing the poison from them was not absorbed by the body. Probably the pocks were really cut off from communication with the rest of the body by phagocytosis and by the inflammation which surrounded them. By vaccination the generalized disease that was produced and which gave immunity was comparable to the invasion period of small-pox, but he could not say how the immunity was caused. He suggested that it might be possible to avoid the local ill effects of vaccination by injecting the lymph deeply into the tissues or into the glands.

VI.—WM. HUNTER, M.D., M.R.C.P., F.R.S.E.,

Assistant-Physician to the London Fever Hospital; Research Scholar to the Grocer's Company.

PART I.—RELATING TO IMMUNITY.

Before discussing the probability of one or other doctrine, it is well to have the facts clearly before our minds. The facts, then—to take the simplest case—are briefly these: that in non-protected animals virulent bacteria inoculated subcutaneously produce little or no local change, grow unhindered, and cause general infection; while in protected animals inoculation of the same bacteria is followed by a local leucocytosis at the point of injection, a certain degree of inflammation is set up, and general infection is prevented.

In virtue of some change in the body, that which was formerly capable of setting up a general disease can now only set up a local affection. What is the nature of this change? On the one hand, we have the bacteria with their powers of forming poisons undoubtedly capable in many instances of affecting the organism most injuriously. These poisons are of two kinds: (1) easily diffusible substances of alkaloidal nature—toxines—whose mode of action on the organism is analogous to that of the vegetable alkaloids; and (2) less diffusible substances of proteid nature, whose nature is still very imperfectly known. So far as is known, however, their action resembles more that of ferments than of ordinary chemical poisons, inasmuch as it is lost on heating to a temperature of 50° or 60° C., at which the active properties of ferments are generally destroyed. Both these classes of poisons stand in the same relation to the bacteria, in so far as they are the special products of their activity, in the same way that nitrogenous products, such as urea, or active proteid substances, such as ptyalin or pepsin, are the products of the activity of cells of higher organisms.

In addition to these two groups of metabolic products formed by bacteria, there is another class, differing both in origin and action from the foregoing. These are also proteid bodies, having, so far as is known, the character of albumoses. These are substances—first described by Nencki in 1880—derived from the bodies of the bacteria themselves, so-called "proteins," for a knowledge of whose action we are indebted, perhaps, most of all to Buchner. They resist in a remarkable way the action of heat, withstanding when in a moist condition even boiling temperatures. Their most remarkable property, however, is their chemiotactic power, the power of attracting wandering cells, and inducing, therefore, a greater or less degree of leucocytosis wherever they happen to be present. Their action in this respect I hope to illustrate to you later on.

It is to be noted as a further difference between these two classes of bacterial products, the toxines and toxalbumens, on the one hand, and the proteins on the other, that the former are only formed, and are formed most abundantly when the bacteria are active, the latter only, and most abundantly, when the bacteria are dying.

A further difference—an important physiological one—may be noted, namely, that while the former are responsible for the general symptoms of disease, the action of the latter is, in the first instance at least, mainly a local one. Without being entirely confined to the part where they are formed, the most important action of these proteins, and the one which lends them their chief interest, is the chemiotactic power above mentioned.

When we turn now from the invading bacteria to the organism thus attacked, we find that the means it has at hand to defend itself are of a two-fold character. On the one hand, there are the cells—especially those free lances of the body, the wandering leucocytes—having the power of seizing upon everything, animate or inanimate, possessing a less power of resistance than themselves, and, in virtue of this power, doing undoubtedly much useful work for the organism both in health and disease. The theory of phagocytosis, so beautifully and skilfully elaborated by Metschnikoff, in the first instance, assumes, on the basis of many observations whose accuracy cannot be seriously

called in question, that this power is exercised in a special degree by the cells in defending or protecting the organism against bacteria.

This is admittedly, however, not the only weapon possessed by the body in its defense. Apart altogether from the action of living cells, the plasma and serum of the blood is now known, through a series of equally beautiful researches, to possess, under certain circumstances, antibiotic properties when withdrawn from the body, bacteria being killed after a short exposure to their action.

It has been shown, moreover, for certain bacteria (for example, vibrio Metschnikovi, by Behring, and Nissen) that the power which the body possesses of resisting their action is proportional to the antibiotic properties of its blood serum, the serum of animals rendered immune having strong bacteria-killing power, while that of the ordinary animal favors the growth of the bacteria. This then is the basis of the view opposed to the phagocyte doctrine, of the so-called humoral doctrine. It is assumed by the upholders of this view that the protecting power possessed by the body is really due to these antibiotic properties of blood serum to the action of the fluids of the body rather than of the cells.

Unfortunately for this view which, in presence of such facts as those above referred to, seems a reasonable, not to say a seductive, one, it is admitted that this relation between degree of protection possessed by the body and the antibiotic properties of its blood serum is not only not a constant, but that in certain cases it is completely reversed, and that the serum of an animal very sensitive to the attack of certain bacteria, when these are injected into the body, may be nevertheless extremely bactericidal in its action on these bacteria when tested outside the body. Thus it has been shown by Roux and Metschnikoff that the serum of young rats sensitive to anthrax has a bactericidal action on anthrax bacilli outside the body; and by Lubarsch that the extravascular blood of a rabbit can kill millions of anthrax bacilli, while a few of these injected into the blood suffice to kill the animal.

It is clear, then, that some caution is necessary in deducing from the action of blood plasma and blood serum after it is withdrawn from the body what its action within the body is likely to be. So far as the evidence at present goes, there is no established relation between the two.

As regards the nature of the substance or substances in plasma or serum to which this bactericidal action is due, little is known further than that they are proteids. In one case the substance was found to have the characters of globulin (Hankin); but with this exception—and the observation is an isolated one—but little progress has yet been made in identifying these substances with any special class of proteids. The most recent work renders it to my mind exceedingly probable that it is not to any one definitely characterizable proteid substance that this bactericidal property of serum is due, but rather to some special association, of an altogether more complex character, of one or more proteids.

The recent work of Dr. Wright, on which I trust we may hear something from him in this discussion, appears to me to have a special interest in this relation, and a very direct bearing on this point.

He has shown that the "tissue fibrinogen" to which Wooldridge ascribed such an important *rôle* in coagulation phenomena, and which he found also to be capable of conferring a certain degree of protection against anthrax, is, in all probability, a double proteid body, one of albumose nature and the other a nuclein substance.

PART II.—INTERPRETATION OF THESE FACTS.

So much, then, for the facts on which, as Professor Sanderson has said, we are for the most part agreed, and so much incidentally for certain of the difficulties that arise in interpreting aright their significance. If we now consider the application of these facts to the phenomena of acquired immunity, as above described, we find that the divergences of opinion which exist amongst bacteriologists relate more to the order of occurrence and relative importance of the events than to the events themselves.

The two chief events are that a short time after the inoculation of virulent bacteria into an immune animal a large number of leucocytes are found at the seat of inoculation, and a large number of the bacteria are found lying enclosed within these leucocytes and other adjacent cells.

According to the doctrine of phagocytosis, the leucocytes have been attracted thitherwards by the chemiotactic action of certain of the products of bacterial action; that they then act as phagocytes, and engulf the bacteria. It is not denied that in "reacting" to the presence of these products they may likewise produce substances capable of acting on the bacteria injuriously without the latter being taken up. It is nevertheless maintained that the intracellular method is the chief method employed in injuring the bac-

teria. The protein substances given off by the dying bacteria exert further chemiotactic action, and attract more leucocytes, till finally, at the seat of attack, is mobilized a regular army of agents capable of resisting successfully all further invasion.

The opponents of this view maintain that the first event is not an attraction of leucocytes, but a death of certain of the bacteria brought about through the agency of bactericidal substances present in the serum, and that the leucocytosis is secondarily induced by the proteins set free from the injured bacteria. The subsequent inclusion of the bacteria within these cells is an event of altogether secondary importance. The cells in taking up the bacteria exercise merely their ordinary scavenging function, and not any special phagocytic function.

The question at issue between the two opposing schools of "phagocytists" and "humoralists," as will be seen, is thus one that lends itself readily to active discussion and controversy, for the differences between them are those of degree rather than of kind.

The phagocytists assert that their opponents attach too much importance to the bactericidal action of blood serum, and too little to the cells; while the latter report that the so-called phagocytic function is a purely scavenging function, and that the chief factor in inducing the leucocytosis is the production of proteins from the already dying bacteria.

In the words of Buchner, the chief exponent of the humoral theory, the essential active processes underlying immunity can only be of chemical nature. According to this theory it is a fatal error to assume that in protected animals the bacteria find themselves precisely the same conditions, before leucocytosis sets in as in non-protected animals. According to the doctrine of phagocytosis, it is the special reaction of cell protoplasm that determines the issue, the action of chemical products being of secondary importance. A certain antagonism there undoubtedly therefore is between the two views; but the doctrines are not in my opinion so opposed to each other as to be mutually destructive.

I gather from the course the discussion has so far taken that some misapprehension seems to exist on this point. It is assumed that there is an inherent antagonism between the two views, and that to establish the one it is only necessary to show up the weakness of the other. Acting on this assumption, the speakers so far have confined themselves mainly to pointing out in how far the doctrine of phagocytosis falls short of perfection. The result has been to show that in their opinion it falls very far short indeed of that point; for we have heard that not only is it imperfect, as we all admit, but that it is utterly opposed to general biological principles; much of it untrue; what of it is true is not new: it is illogical, mechanical, in fact altogether unsatisfactory. Having made out this case to their own satisfaction, the speakers quietly assume that they have firmly established the immense superiority of the opposing view.

Their practice appears to be based on one, if report speaks true, not altogether unknown at the bar, which consists in supporting a case itself weak, by exposing the weak points of the one opposed to them. In the present instance it takes the form of abusing the doctrine of phagocytosis, and letting judgment go by default in favor of the "humoral" doctrine. They have unconsciously accepted a brief for the latter doctrine, and have done their best for their client by abusing the opposing one.

Like many other arguments that in the first instance appear very strong those adduced against the correctness of the doctrine of phagocytosis lose in my opinion much of their weight on being carefully looked into. I feel myself freer to express this opinion because I am not at present appearing on behalf of that view, but have accepted a "watching brief" on behalf of a client of my own; an intervening client whose interests and reputation appear to me not unlikely to suffer in the action thus raised against the doctrine of phagocytosis.

Exercising my right, I do not choose to divulge this client's name.

Objections to the Doctrine of Phagocytosis.—The objections raised in this discussion against the doctrine of phagocytosis group themselves into two divisions: (1) General, those which impugn the inherent probability of the doctrine charge it with being mechanical, illogical, opposed to biological principles; and (2) special, those which dispute the accuracy of the data on which it is based.

1. *General Objections.*—With regard to the more general objections, it is extraordinary how much opposition has been called forth by this doctrine, and how much warmth of feeling has been imported into its discussion by the parties on both sides. It is little wonder that outside witnesses of the controversy should conclude that some deep underlying principle must be at stake, and that the two views must be utterly opposed to each other.

What then are the principles involved? On the one hand it is asserted by the upholders of the doctrine of phagocytosis that living cells have the power, under certain circumstances, of taking up living bacterial organisms; of acting on them in such a way as first to kill them and then completely destroy them.

In other words, it is asserted that one form of living protoplasm has the power of taking up within itself another and presumably weaker form and destroying it altogether. If any biological principle is more firmly established than another, it is surely that such a power is possessed by protoplasm. It is maintained, further, that this is the chief way in which the body protects itself against attacks of infectious disease, and that the difference between one who has had an attack of an infectious disease—for example, scarlet fever—and has thereby acquired protection, and one not so protected, is that in the former the individual cells have acquired some additional property, which enables them to resist successfully from the beginning where previously they had only been able to do so after the disease had run a certain course.

As thus put, the doctrine seems to lay itself open to the charges brought against it; that it does not add much to what we previously knew; that it only expresses in terms of the cell what we have long been in the habit of stating equally clearly in terms of the body as a whole; moreover, that it brings no new properties of the cell to light, for that we have long known that the cells had a sort of scavenging function, and were in the habit of taking up, so to speak, whatever they could lay hold of.

Further, as Dr. Klein would maintain, it is not proved that the bacteria find themselves so uncomfortable with the body as is generally supposed; that possibly the cells, so far from enjoying their repast of microorganisms, suffer as often as not from surfeit, and themselves die, victims of their own voracity. In short, the doctrine is in great part not new, true, nor logical.

In reply to these various objections it may be urged with some force that, even if it had only directed our attention from the body as a whole to processes going on in the individual cells of that body, an important step would, in my opinion, have been taken—a step in the direction in which all advance in pathology has been, and is destined to be, made—namely, from the general to the special. The history of pathology is a history of such advance, from the spirits which formerly caused disease, independent of the body, to the body itself; from the body as a whole, with its vapors and humors to the particular organs involved; from the organs to the special cell structures implicated; from these in turn to the nature of the disturbing cause. Further, that while it is not claimed that any new property of cell protoplasm has been discovered, the observations on which the doctrine of phagocytosis is based are an important extension of our knowledge of cell function in an entirely new direction. It is the application of the teachings of cellular pathology to the phenomena of infectious disease and immunity from that disease, and to that extent it can fairly lay claim to have added something new to our knowledge.

As to Dr. Klein's demonstration of the phagocytic process in leprosy and other chronic diseases, and his contention that it can, therefore, have nothing to do with immunity, I venture to submit that that contention is altogether beside the mark, for it is not asserted that phagocytosis and immunity are synonymous terms, and the contention fails altogether to take note of the difference between an acute infectious disease and one running a slow course such as leprosy. The upholders of the doctrine of phagocytosis cannot be held responsible for these differences; they are only concerned, so far as they can, to explain them. And when we endeavor to do this, we find that not only does the above contention fall altogether to the ground as an argument against the relation of phagocytosis to immunity, but it lends, in my opinion, strong support to that view; for chronicity of an infectious disease like leprosy or tuberculosis can only be due to one or other, or both, of two causes —relative weakness and harmlessness of the attacking microbe, that enables it to maintain a precarious existence by not exciting any particular disturbance, or only a local disturbance; or, secondly, presuming the microbe to be fairly strong, great and prolonged resistance carried on on the part of the body for a term of years.

In warfare, next to a complete defeat of the enemy, that which speaks most for the efficiency of a force is its power of carrying on a protracted struggle against superior forces. And so likewise in infectious disease. Next to successful resistance once for all to a disease as in measles or scarlet fever, that which speaks most for the resisting power of the body is chronicity of the disease itself. When, therefore, Dr. Klein points to phagocytes crammed with bacilli in leprosy, he points to facts that, so far from upsetting the doctrine of phagocytosis, lend strong support

to it, for chronicity of an infectious disease I would define as a relative immunity. His argument would have had weight against the phagocyte doctrine if he had been able to point to leprosy or other chronic infectious disease, and demonstrate that no bacilli were to be found in cells, and yet the body had been able to carry on its struggle for many years. As the facts stand, any force his argument has is in favor of the phagocyte doctrine.

And when we come to the question of logic, which position is the more logical—that which ascribes to cell protoplasm and direct cell action, as the doctrine of phagocytosis does, or that which ascribes to certain products of that activity acting at a distance from the cell, as the opponents of that view maintain, the power of combating and ultimately destroying pathogenic micro-organisms, I confess for my own part I have little hesitation in giving my opinion.

And it is this that the view which ascribes to products of cell action present within serum or plasma the property of being able successfully to wound, maim, and render harmless invading bacteria, and yet denies to the protoplasm of the cells which produce them the slightest power of controlling or in any way influencing the growth or virulence of bacteria. Such a view, I submit, is as utterly illogical as any could well be.

On grounds of logic I give decidedly the preference to the view which subordinates the product to the cell which produces it, and hence if I have to choose between the phagocyte theory which exalts the direct action of the cell without ignoring its more indirect action and the humoral theory which exalts to a pinnacle the action of bactericidal substances admittedly produced by cells, while denying to these same cells any special bactericidal action, I give my decision unhesitatingly for the doctrine of phagocytosis.

2. *Special Objections.*—The above does not constitute, however, the head and front of the offending of this doctrine in the eyes of its opponents. That which above all appears to them as gratuitous foolishness in it is, I take it, that it not only ascribes to cells, but to certain particular cells, this special phagocytic function. It is this pretentious claim on behalf of the leucocyte and lymphocyte that rouses the special scorn and indignation of the humoralists; and they express a contempt for these little structures that, could they but feel it, would cause them to shrivel up with shame at their own want of modesty and general aggressiveness of conduct towards bacteria.

Curiously enough, it is this special claim of the phagocyte theory, when considered in relation with the facts on which the humoral theory is based, that commends it specially to my acceptance, and strengthens its otherwise inherent probability—the inherent probability of the view, namely for which it contends, that the duty of defending the body against the attacks of infectious disease is not distributed amongst the cells of the body as a whole, but is relegated to certain special cells. These are arranged so as to constitute what has been termed two lines of defence. The first line of defence is formed by the leucocytes of the blood; the second by the lymphocytes and of follicular tissue generally, chiefly that of spleen. The former bear the first brunt of the attack at the seat of inoculation, the latter act as reserve forces. It is these cells on whose behalf I consider myself "retained."

According, then, to the doctrine of phagocytosis, acquired immunity is due to an altered habit of body on the part of these cells, transmissible from generation to generation. Its opponents, scorning such a view as visionary and unsatisfactory in the extreme, and based on insufficient data, prefer to refer it instead to a change in the character of the fluids of the body. This latter view implies an altered constitution on the part of the plasma and serum of the blood, without even suggesting in what way such an alteration has been brought about, except through the agency of cells.

Moreover, this alteration is one that in certain cases presumably lasts for years, and hence one of two conclusions follows: either that, once produced, it remains permanent—that blood plasma can transmit its characters without the intervention of cells; or that the change is one constantly being carried out by the cells of the body, The former, I need hardly say, is a wild hypothesis having no support either in facts or analogy; and therefore we must accept the alternative conclusion that, *even on the humoral theory of the nature of immunity, the essential change is an alteration in the cells, such as the doctrine of phagocytosis contemplates.*

This, however, it may be urged, does not carry us very far forward. We knew before, as Professor Sanderson has already pointed out, that the body possessed what he has termed a specific power of resistance to disease; and this *vis medicatrix naturæ* is naturally derived from its cells, if not resident in them.

The final teaching of the doctrine of phagocytosis would thus appear, as Mr. Kanthack

pointed out, to resolve itself into this: that what we formerly in our ignorance referred to the organism as a whole, we now refer to the individual cells of that organism. I have already replied to this objection so far as it applies to the cells of the body as a whole; I have now to submit that in going further, and referring to certain particular cells of leucocyte and lymphoid nature, a special *rôle* in combating infectious disease and in conferring immunity, the doctrine of phagocytosis is not only an advance, but constitutes, in my opinion, a great advance in our knowledge of the mechanism and nature of immunity.

I base this belief on grounds independent altogether of bacteriological studies—on data derived from my study of the physiology and pathology of the blood—and I will now endeavor to make these grounds clear.

The changes relied on by the opponents of the phagocytic doctrine of immunity affect in a special degree, if, indeed, not exclusively, the plasma and serum of the blood, and are to be referred to antecedent changes in the cells of the body as a whole, rather than in any particular group of cells.

In this view I recognize a great resemblance to one still widely held by both physiologists and pathologists regarding the constitution of the blood and blood plasma—namely, that the composition of the blood at any time is determined by the united action of all the tissues of the body.

As I had occasion to point out in the Arris and Gale Lectures of 1889, such a view is not supported by facts; the facts, on the contrary, point to a certain class of cells grouped for the most part in relation to a particular portion of the circulation as being primarily, if not exclusively, concerned with the constitution of the blood plasma—whether in building it up or in effecting alterations in it.

These cells are the leucocytes of the blood and the mass of lymphocytes lying in relation to the portal tract, especially those of spleen and alimentary tract.

It is a coincidence to which I am inclined to attach not a little importance that the class of cells thus found to be mainly responsible for the constitution of the plasma is precisely the same group of cells found by the upholders of the doctrine of phagocytosis to possess phagocytic properties in a specially marked degree, and that the chief seats of phagocytic action outside the circulation itself are, as is agreed to by all, in the first place the spleen, and, as has been clearly shown by Ruffer, in the second place the alimentary tract.

Action of Spleen in Relation to the Blood and to Infectious Diseases:—It is not my intention to adduce here or now the evidence on which the above conclusion is based, so far, at least, as the leucocytes generally and the lymphoid cells of the gastro-intestinal tract are concerned. Suffice to say that I have always found changes in the constitution of the plasma associated with evidences of great activity on the part of these cells—nuclear division, increased fragmentation, and formation of granular *débris*. And as to the important part taken by these cells as phagocytes, I leave to others who afterwards speak in this discussion. In the hands of Dr. Ruffer and others, I have no doubt ample justice will be done to that *rôle*.

For myself I propose to confine my attention solely to the spleen, and endeavor to establish the justice of the claim made on its behalf by the doctrine of phagocytosis, that its cells have a special phagocytic function independent altogether of the scavenging function common to them and other active cells. In particular I hope to show that they have what is claimed for them and to a less degree for the leucocytes by the phagocyte doctrine a greater selective power than other cells of the body, and that this selective power is specially exercised by them in relation to causes tending to affect the constitution of the blood plasma.

The observations I am now about to refer to date from 1887. They were not made with any reference to their bearing on the doctrine of phagocytosis—a circumstance that should, in my opinion, enhance any value that may attach to them in this relation.

The evidence I would adduce from them relates to the action of poison on the blood (1) in the presence and (2) in the absence of the spleen. Briefly stated, it goes to show that the power possessed by certain drugs of altering the constitution of the blood depends primarily on the action of the splenic cells, and not on the cells of the body generally.

My experiments show for the poison toluylendiamin that its well-known destructive action on the blood is in an altogether special degree dependent upon the presence of the spleen; and that in the absence of that organ animals (rabbits) can tolerate about twice the dose without the slightest effect that would otherwise suffice to produce recognizable changes in the blood.

This difference in the action of poisons on the blood when the spleen is present and when it is absent does not apply to substances whose action on the blood is mainly phy-

sical, such as distilled water or glycerine, or, although to slightly less degree, pyrogallic acid. Nor is the power thus possessed by the spleen in the case of certain poisons due to any scavenging function on its part—the presence of a greater quantity proportionately of the substance in the spleen than elsewhere. On the contrary, by a method that enabled me to recognize the presence of even one-hundredth part of a milligramme of the above poison, and whose margin of fallacy I found to be by accurate control to be less than ½ per cent., I was able to show that the amount present in the spleen was less than in any organ of the body and less than that in the blood.

The result I interpret as showing what indeed other observations clearly satisfied me was the case that its injurious action on the blood was not a direct one, but an indirect one due to the intermediate action of certain cells, notably those of the spleen.

The bearing which these observations have on the subject now under discussion, the *rôle*, namely, of the cells of the spleen in modifying the constitution of the plasma of the the blood will, I trust, be obvious. For the subject of immunity and phagocytosis in relation to immunity involves a consideration not only of the action of cells on microbes, but also of the action of the cells on the products of these microbes. And these experiments appear to me clearly to establish that as regards these products, whose action can in no case be considered a purely physical one, their action on the plasma of the blood, for good or ill, must in a very special degree be dependent on the action of the splenic cells —of cells, which are claimed by the doctrine of phagocytosis to possess this phagocytic power in a special degree. *They clearly show at least for the products what the doctrine claims to be the case for the microbes themselves, that the splenic cells possess a special selective power that must render their action of the very greatest importance in the struggle against infectious disease.* And we are not without more direct evidence that such is the case. A series of experiments have recently (1889) been published, by Bardach, showing that the absence of the spleen affects materially the chances of recovery from infectious disease. His experiments were made on dogs, which are not naturally susceptible to anthrax even when inoculated subcutaneously; when it is injected into the blood they also resist, although a certain number succumb. After removal of the spleen they become much more susceptible. Thus out of twenty-five dogs whose spleens were removed, no fewer than nineteen died, while out of the same number of normal dogs similarly inoculated with anthrax only five died.

On the humoral theory of the nature of immunity it is difficult to understand how the absence of the small quantity of serum —to whose antitoxic and antibiotic properties recovery in such cases is ascribed—presumably present in the spleen could make a difference of such vital importance. Moreover, it is not easy to reconcile these facts with Dr. Klein's contention that even when phagocytes are present it is as probable that the microbes find themselves as comfortable within the cells as outside of them. If such were the case, the spleen ought really to be a favorable seat for the growth and multiplication of bacilli rather than the converse; and its removal should rather increase than diminish the animal's chance of recovery.

It must not be supposed for a moment as tending to weaken the force of this argument that the animal after the removal of its spleen is in an unhealthy state. On the contrary, except in respects of its power of resistance to the action of poisons and microbes, it appears to be in no way affected by the operation, as I have constantly had occasion in the course of my experiments to observe.

Time will not permit me to touch, as I should have liked, on the subject of chemiotaxis and its relation to phagocytosis and immunity. What I should have said I may compress into the few remarks that I may make in demonstration to you, as I now propose to do by means of lantern slides the chemiotactic properties of certain of the tox-albumoses I have isolated from tuberculin. The method employed to study the action of these substances was the one of which you will hear more from Dr. Ruffer, whose method it is. To Dr. Ruffer I am indebted for his great kindness in himself making the first obsevations with these substances for me; and I gladly take this opportunity of thanking him.

CONCLUSIONS.

In conclusion, I would formulate in a few words the chief grounds on which I think the doctrine of phagocytosis claims from us a greater credence than the one which has been opposed to it. I am disposed to claim for it that in revealing to us as it has done for the first time the potentiality possessed by cells of themselves combating the attacks of virulent microbes, it has added much that is not only new, but it is also valuable and important regarding the means by which infectious diseases are combated, and that our

knowledge of the bactericidal properties of blood serum, to which so much importance is attached by the opponents of the phagocyte doctrine, is itself the direct outcome of the attention drawn by Metschnikoff to the action of cells.

So far from being antagonistic, the two doctrines—the phagocytic and the humoral—mutually supplement and support each other; disproof of the phagocytic theory, so far from proving the correctness of the humoral, tends, in my opinion, to weaken it. Both theories recognize the existence of antitoxic and antibiotic substances of blood serum and blood plasma; but it is, in my opinion, the peculiar merit of the phagocytic as opposed to the humoral doctrine that it subordinates them in interest and importance to action of the cells from which they admittedly derive their origin. If a choice has to be made between the two views, the one we can least do without is that which attaches a preponderating importance to the cells of the body than to the fluids, to the action of the cells rather than to the products of that action, to the agents rather than to the instruments.

I am disposed to claim for the phagocytic theory that, while it does not profess, as its opponents allege, to be in any way a complete or satisfactory explanation of the phenomena of immunity, as a working hypothesis—and it is that we must first look for—it is in all respects more logical, more tenable, more in consonance with the teachings of cellular pathology, and I would almost say more biological than that which ascribes to the fluids of the body the first *rôle* in protecting it against infectious disease.

Considered apart from the teachings of phagocytosis—as the supporters of the humoral doctrine appear always desirous of doing—the humoral doctrine has as its chief characteristic, in my opinion, a self-satisfying sufficiency for which there is no real basis. It appears to explain, without explaining. It speaks much of antibiotic and antitoxic substances in body fluids, and is apparently content to rest there; it does not ignore their origin from cells, indeed cannot possibly do so; but, unlike the doctrine of phagocytosis, it does not encourage further inquiry into the nature of the changes of cells which lead to their production, into the conditions which determine the precise "reaction" in the cells necessary for their formation in the first instance.

On both views the final nature of the change, whether in cell or in product, is unknown; but as the change in the cell must necessarily precede that in the product, and the doctrine of phagocytosis directs most attention to the cells, that doctrine has in my opinion claims on our support out of proportion greater than any teaching that would even temporarily draw our attention away from the cell to the fluid in which it lies, that would exalt the product at the expense of the producer.

Lastly, I claim for the phagocyte doctrine that in attaching special importance to the action of certain cells—leucocytes of blood, cells of spleen, and lymphocytes generally—it draws attention to facts of wide physiological importance, namely, that it is precisely these cells that govern, in a special degree, the constitution of the plasma and blood serum. Whether acquired immunity be due to a direct phagocytic action of these cells, or to antibiotic or antitoxic properties of the plasma of the blood, the preceding changes must affect in a special degree these cells.

VII.—SIDNEY MARTIN, M. D.,

Assistant-Physician, University College Hospital.

Dr. Sidney Martin said that the question might be studied in two directions: (1) as to what rendered an animal naturally immune to a disease, and (2) as to the mode of production of experimental immunity. Immunity produced by experiment was a much better method of research than the investigation of natural immunity, inasmuch as the conditions of experiment were controllable.

Of the several examples of experimental immunity now known, that of anthrax was perhaps the best to be discussed, as the morphology of the bacillus anthracis was so well known.

In the classical experiments of Pasteur the attenuated bacillus anthracis when inoculated into a sheep was found to produce some digree of illness, which passed off. The animal was rendered immune, as the inoculation of a virulent bacillus one month after vaccination failed to produce death. What they wished to know was what happened to the virulent bacilli injected; why did they not kill the sheep as they did in an unprotected animal? Those who depended on phagocytosis for an explanation would say that the action depended on the activity of the leucocytes at the seat of the inoculation of the virulent bacilli, and that these leucocytes effected the destruction of the bacilli. This explanation was, to his mind, by no means sufficient. They had in the experiment just quoted first the injection of an attenuated living virus, and then

a subsequent inoculation with a virulent virus, also living. Now, as he had shown in his last paper in the Report of the Medical Officer of the Local Government Board (1890–1891), the attenuated anthrax bacilli formed the same chemical products as the virulent bacilli; but that whereas the attenuated bacilli would grow well for a time in a culture medium (such as alkali-albumen broth) in which they could form the products, after a certain period they stopped growing; the virulent bacilli would, in a similar solution, go on growing for a much longer time, and would produce a much larger quantity of chemical products than the attenuated. A bacillus, whether attenuated or virulent, acted by means of its chemical products. In the case, therefore, of Pasteur's sheep experiment, it must be said that immunity was produced by means of the chemical products of the attenuated bacilli, and yet the virulent bacillus which produce the same products did not kill the animal. Its natural growth and activity had been inhibited. How could this be explained? Part of the explanation appeared to be that the inoculation of the attenuated virus accustomed the animal to the specific chemical poison of the bacillus. Several instances of tolerance of drugs, such as morphine and arsenic, were well known in pharmacology—a tolerance which, when established, would enable the person to take with impunity a dose of the drug which would be fatal to an unprotected person in a few hours.

A certain degree of tolerance to virulent anthrax bacilli might be established in animals by means of the chemical products of the micro-organisms, as in the following experiments quoted:

A guinea-pig was inoculated under the skin of the right thigh with 10 milligrammes of the anthrax albumose and 9 milligrammes of the alkaloid; under the skin of the left thigh, with a "mash" of the spleen of an animal which died of virulent anthrax. This dose of the chemical products produces only a slight physiological effect in guinea-pigs. The animal lived four days and a half, whereas the control animal died within twenty-four hours. The lesions found were those of anthrax. In a second guinea-pig, done at the same time, the same dose of chemical products and of "splenic mash" were mixed together and injected under the skin of one thigh. This animal showed no change for twenty days, when it died somewhat suddenly. A *post-mortem* examination showed no œdema at the site of inoculation, and only a slight enlargement of the spleen, which was very pale.

In the first experiment, he should say that part of the explanation of the delay of death was that the chemical poisons influenced the organs (of the central nervous system) which they selected for their action, and that the effect of this action was to prepare them for the onset of the larger amount of products produced by the virulent bacillus, but that the alteration in the tissues was too slight to prevent death. Such an experiment was a very imperfect imitation of what occurred after the inoculation of an attenuated living virus, for he thought that the products of the attenuated bacillus, being gradually formed, were gradually absorbed, so that the physiological effect was one of repeated small doses of the specific poison, the action lasting for a long period of time. That the chemical products of pathogenic bacteria were a long time in the body he knew from his own experiments. A single dose of the anthrax albumose would produce fever lasting five days, and with the products from other diseases he found evidence of their presence in the blood ten, or even twenty-four days after inoculation. It was probable, therefore, that the chemical products of attenuated bacilli would remain longer in the body than when the chemical products were simply injected, and he had but little doubt that this retention of specific chemical substances in the blood (which they profoundly affected) had an important bearing on immunity.

Why, it might, however, be asked, did not the virulent bacillus grow in the artificially immune animal? Even supposing the chemical products of the attenuated virus were present in the body at the time of inoculation with the virulent bacilli, could they be supposed to stop the growth of the bacilli, or weaken them so that they behaved like the attenuated virus in having a short existence? The second experiment appeared to bear on this point, for mixing the chemical products with the bacilli delayed death for twenty days, while in the first experiment, where the injection occurred once on each side of the body, death was delayed for only fourteen days and a half. Now, if virulent bacilli were grown in a flask containing a nutrient medium from which they could form their products, after a time the growth stopped, just like peptic digestion, where the products choke the action of the ferment. It was hardly possible, he thought, that the small amount of products which might be present in the body after the injection of the attenuated virus could choke the growth of the virulent bacillus by their own action, but it is not improbable that the profound effect which they

had on the blood might diminish the advantages which that liquid possesses of serving as a nutrient medium for the bacillus. He did not pretend that what he had stated explained immunity, but they were matters for thought and for future experimentation, as showing that there was something beyond phagocytosis in the question of immunity.

VIII.—ALMROTH E. WRIGHT, M. D. DUB.,
Late Grocers' Research Scholar

Dr. Wright said he did not intend to enter upon the main issues of the debate, as he had no original observations to communicate which had a direct bearing upon phagocytosis as a method of resisting disease. Without, however, taking a side as a "phagocytist" or a "humoralist," he might perhaps be permitted to bring into hotchpot a few observations upon the subject of chemical immunity which might turn out to be pertinent to the matter in discussion.

The history of the subject he had been engaged upon was shortly as follows: The late Dr. Wooldridge, in 1888, described a method of what he termed "chemical protection" against anthrax. He found that when he administered tissue fibrinogen to rabbits they remained immune against a subsequent injection of anthrax. He employed tissue-fibrinogen solutions, which were prepared either from the thymus or from testicles, and which he subsequently boiled in order to render them sterile. His results did not appear to have been uniformly successful, and he seemed to have attributed the failures in great part to the fact of his protective fluid becoming inert during the process of boiling. Dr. Wooldridge died, and his work was left in this incomplete condition.

Mr. Hankin, of Cambridge, in whose mind a somewhat similar idea with regard to to chemical protection had been simmering before the date of Wooldridge's publication, was the next to take up the matter. He adopted the term "defensive proteids" for the albuminous substances in which protective chemical properties were supposed to be resident, and he proceeded to graft the idea of a bactericidal power on to the more generic conception of a defensive proteid. He suggested, for instance, that if Wooldridge's tissue fibrinogen really conferred an immunity against anthrax, it probably conferred that immunity by virtue of a bactericidal property with which it was endowed. Dr. Wright gathered that Mr. Hankin had since abandoned this suggestion.

The next observation of Mr. Hankin which he wished to bring into relation with Wooldridge's work was his observation that a particular substance—or more probably mixture of substances—of protective virtue could be extracted from the spleen of the white rat—that is, from the spleen of an animal which was known to be relatively immune against anthrax. This substance or mixture of substances, under the name of an alexin, was, if he understood Mr. Hankin aright, to be considered responsible for the measure of immunity which the white rat possessed over the more susceptible brown rat. He would endeavor to deal very briefly with the work of those two observers.

With regard to Wooldridge's work, it was obviously necessary to reopen the investigation of the subject by repeating his experiments, and then proceeding to isolate the constituent to which the immunity was due. It also seemed desirable to adopt some more appropriate method of sterilization than that of boiling, for Wooldridge himself had recognized the disadvantages which were associated with this method.

Dr. Wright attempted to do these three things in a paper which was read at the International Congress for Hygiene last year.* He there showed that sterilization by means of a Chamberland's filter might with advantage be substituted for the method of heat sterilization. He further showed that tissue fibrinogen was a proteid substance which belonged to the class of the nucleo-albumens or nucleo-proteins. Lastly, he reported several series of experiments in which he succeeded, by means of tissue-fibrinogen injections, in prolonging or preserving life in rabbits which had been inoculated with virulent anthrax.

Certain defects in his experiments in the matter of preserving his tissue-fibrinogen solutions in an absolutely aseptic condition throughout the experiments he had since remedied, and had obtained exactly the same results with absolutely sterile solutions. The results of his experiments on anthrax were that he had never made a series of experiments without obtaining either a prolongation of life or a complete cure by means of the tissue-fibrinogen injections. The results were, however, as yet by no means satisfactory, and there were difficulties to be contended with in the matter of the attenuation of the tissue-fibrinogen solutions during sterilization by the retention of the tissue-fibrinogen on the pores of the filter.

Having got thus far, he was naturally anxious to obtain some information as to the

**British Medical Journal*, September 19th, 1891, p. 641.

manner in which this curative property of tissue fibrinogen became effective. He found, in conformity with Wooldridge's previous observations, that anthrax could be got to grow in tissue-fibrinogen solutions. He therefore concluded that whatever the effect of tissue fibrinogen might be due to, it was clearly not due to a bactericidal power. Mr. Hankin, he believed, agreed with him in this.

Dr. Ruffer had suggested to him at the outset of his work that tissue fibrinogen might possibly act as a cell stimulant. From this, and from a paper of Groth* upon the effects of an intravascular injection of leucocytes he had turned his attention to the examination of the blood and to the enumeration of the leucocytes after tissue-fibrinogen injections. These enumerations gave at once some very tangible results. In every case the injection of tissue fibrinogen was observed to be followed by a remarkable increase in the number of leucocytes. He had repeatedly seen them increased to as much as six times their normal number, and at the same time a remarkable poikilo-leucoytosis made itself felt, some of the corpuscles being of enormous size, and others, again, of very diminutive size. At this stage of the paper he came across the very remarkable paper of Horbaczewski's† upon the physiological effects of nuclein.

Now, since he had shown in his previous paper that nuclein was a constituent of tissue fibrinogen, and since Horbaczewski proved that the admistration of this nuclein resulted in the production of a leucocytosis, he naturally turned to investigate whether the protective effects of a tissue-fibrinogen solution could be obtained by an adminstration of its nuclein moiety alone. He anticipated that he should incidentally reap the advantage of an exact dosage, and also an advantage in the matter of obtaining aseptic solutions with greater facility. He had only just begun the investigation of the matter, but had already been able to satisfy himself that a very remarkable prolongation of life resulted from he administration of the nuclein before an anthrax inoculation, and that this prolongation of life was associated with an increased leucocytosis.

In what relation did this chemical protection stand to Mr. Hankin's researches on immunity? Mr. Hankin obtained his alexin from the spleen of the relatively immune white rat. He obtained it by extracting it with what was practically a normal saline solution. If there were any tissue fibrinogen present in an organ a watery solution would extract it, and in the spleen, where there were leucocytes in relatively large quantities, the main constituent of leucocytes, that was, tissue or cell fibrinogen, must of necessity be present. Therefore Mr. Hankin's extracts of white rat spleens would contain tissue fibrinogen. Mr. Hankin's next proceeding was to precipitate his watery splenic extract with alcohol, redissolve the resulting precipitate in water, and to employ this last extract, after dialysing away the salts, as a protective fluid. The method of preparation was an almost ideal method for ensuring the presence of tissue fibrinogen in Mr. Hankin's final solution, for while the alcohol precipitation might exclude other elements which might be present in the splenic extract, it certainly could not exclude the tissue fibrinogen, for this substance was not rendered insoluble by alcohol.

He thought, therefore, that Mr. Hankin's alexin was the same thing as Wooldridge's tissue fibrinogen, or at any rate that it could not fail to be contaminated with it. In this connection he would point out that the nuclein with which Horbaczewski's experiments were conducted was prepared from the leucocytes of the spleen. With regard lastly to Mr. Hankin's observation that his alexin was found only in the spleen of the relatively immune white rat, he suggested that this might possibly depend upon a greater development of the adenoid tissue of the spleen in the white rat, for it was well known that the spleen played an important part in the conflict of the organism with the micro-organism of disease. A greater development of adenoid tissue would go hand in hand with a larger percentage of tissue fibrinogen in the extracts.

In conclusion he adverted for a moment to the newer development of the Metschnikovian doctrine which aimed at the reconcilement of the opposing schools of phagocytists and humoralists by assuming that the disintegration products of the white corpuscles played a part in the conflict of the organism with infective disease. Each of these chemical disintegration products might possibly act in a protective manner by virtue of either a chemiotactic power, a bactericidal power, or a cell-stimulating power.

Dr. Ruffer had determined for him that tissue-fibrinogen solutions had a powerful positive chemiotactic power. The observation seemed to him of interest as it might help to explain how fresh leucocytes might be attracted to the seat of infection the bacteria

**Dessert*, Dorpat, 1884.

†*Sitzber. d. Wiener Acad.*, C. Abth., April, 1891.

having gotten the better of the first leucocytes which had arrived on the scene.

With regard to the bactericidal power of tissue fibrinogen, it seemed to him that the question had not finally been decided in the negative as his observations on growing anthrax in tissue-fibrinogen solutions were made upon tissue fibrinogens derived from the testicle, and there might conceivably be points of difference between the two varieties of tissue fibrinogen. On the other hand, he thought that great caution was required in inferring from a bactericidal property of a solution in a test tube to the bactericidal power of the same substance in the organism, because such a substance, for instance, as tissue fibrinogen was rapidly broken down inside the organism.

With regard to the cell stimulating powers of the products of the decomposition of leucocytes, it has already been seen that tissue fibrinogen possessed such powerful stimulating properties. He thought that tissue fibrinogen and nuclein might be regarded as cell manures; for by whatever method these substances were introduced into the organism, they were invariably found to produce a leucocytosis.

IX.—J. G. ADAMI, M.A., M.B.,
Fellow of Jesus College, Cambridge.

When the time allowed to each participant in this evening's discussion is necessarily so short, perhaps the best method of attacking this subject of immunity is to start with the best and most complete series of observations in the case of one disease, observations that are both recent and reliable, and then, accepting the facts so gained, to observe how they oppose or confirm the various theories which have been brought forward. For this purpose I would select the very full and pregnant research of Klemperer upon pneumonia. The result of these observations may be briefly stated as follows:

1. Immunity against pneumonia can be bestowed upon susceptible animals by introducing in the tissues the sterilized products of growth of the pneumococcus. This immunity is, in general, but of a temporary nature.

2. Such immunity induced by injection of bacterial products does not immediately manifest itself; indeed, fourteen days must elapse before the simple products bring about their effects. But if the sterilized products be heated either to 106° or 107.5° F. for three or four days, or to 140° F. for two hours, then injections induce immunity within four days.

3. The warmed "vaccine" leads to a reaction of but short duration; the unwarmed brings about a long-continued febrile state at the end of which the animal becomes immune.

4. Thus the fever, with its elevation of temperature, and the antecedent heating of the vaccinal material induce the same result. One or other process would seem to be necessary in order that sterilized bacterial products develop immunity.

5. But, further, the blood serum of a "protected" animal injected into the veins of a susceptible animal confers immediate immunity. There is no delay. Evidently, therefore, some substance is present in the blood serum of an animal made immune—a substance not present in the sterilized culture fluids of the pneumococcus. The bacterial products, therefore, do not *per se* bring about immunity, but, through the febrile reaction, some other body, having immunity-conferring properties, is gradually developed.

6. What is more, this same substance has curative properties, acting, not so much on the pneumococci themselves (for in its presence these continue to proliferate), but upon the poisons or toxines manufactured by them.

7. Hence Klemperer distinguishes two proteids, the pneumotoxine, which can be isolated from cultures of the pneumococcus, and the anti-pneumotoxine, to be obtained from the serum of immunized animals.

It is unnecessary for me to dilate upon the way in which this work of the two Klemperers fulfils and elucidates the previous observations of Salmon and Smith, Christmas, Roux and Chamberland, Hankin, Bouchard, and his school, Brieger and Fraenkel, etc., upon bacterial products, of Wooldridge, Christmas, Hankin, Buchner, Hankin and Martin, Tizzoni and Chattani, and Fraenkel upon proteid bodies capable of inducing immunity, and, in the case of some of these observers upon the antitoxic properties, as opposed to the bactericidal properties of such proteids. Nor need I do more than point out the light that these observations throw upon the meaning of the febrile state. Evidently, as shown by a large number of recent studies, the phenomena of infection and immunity are at base chemical; certain substances are produced by the bacteria on the one hand, by the organism on the other, whose action is of a chemical or chemico-physical nature.

But now comes the question, how is this action exerted within the body? Are bactericidal and antitoxic substances normally free in the blood, are they developed within

special cells, or are they generally distributed throughout the tissues of the body?

In the first place it cannot be too strongly insisted that their presence in blood serum is no certain indication of their presence in blood plasma. Blood serum and blood plasma exhibit marked differences in their characters, and nothing is more marked than this difference in the bactericidal powers of the two fluids. An animal which is most susceptible to a given disease has time after time been shown to yield a serum capable of destroying large numbers of the micro-organisms causing that disease; and, at the risk of repeating what is well known to many, I would again call attention to Lubarsch's classical observation, that whereas 10,000 to 12,000 anthrax bacilli are all that can be injected into the circulation of a rabbit without causing a fatal disease, one cubic centimetre (15 minims) of the blood serum of such a rabbit will in a few minutes destroy the same or a much greater number of the bacilli. While I am far from convinced that under no conditions the plasma can become bactericidal or antitoxic, I still think that sufficient satisfactory evidence has not yet been brought forward in support of the humoral theory. The cases mentioned by Professor Klein are not without a flaw; the rapid diminution of the number of bacteria present in arterial or venous blood is not conclusive evidence that these bacteria have undergone destruction in the blood plasma (phagocytosis being as yet undeveloped). Professor Klein and the humoralists have to bring forward surer proof than has yet been adduced that the bacteria, as foreign bodies, have not been arrested in the capillaries of various organs, and that the diminution of their number in the circulating blood is not caused by such a filtration process.

Again, while I am prepared to admit freely that bactericidal and antitoxic substances may appear or be developed in the cells forming many of the tissues of the body, I hold that it has yet to be proved that this can obtain to any great extent. We are still without proof that, save in the case of organs formed largely of leucocytes and potential phagocytes, the tissue can have powers at all comparable to those possessed by the serum and body fluids. We therefore are driven to a third possibility, namely, that the difference between serum and plasma depends upon an alteration in the condition of the white corpuscles, and that the leucocytes are a most essential factor in the production of immunity. There is not time here to bring forward all the arguments in favor of this view, but this I may say: what other interpretation is to be placed upon (not simply the engorgement, but) the enlargement of lymphatic glands, the enormous increase in the number of white corpuscles in the blood in zymotic disease (under conditions to be referred to later), the determination of leucocytes towards legions of bacterial invasion, unless it be that the leucocyte plays a most important *rôle* in protecting the organism? It is true that there are conditions in which it is wanting. In pneumonia, for example, as Tchistovitch has shown, where the virus is not very powerful there an increase occurs, where the virus is very strong there a diminution is to be made out in the leucocytes of the blood. The same occurs in regard to the amount of diapedesis resulting after local invasion, this depending upon the virulence of the invading organism. Taking into consideration general rather than local infections, we learn that the leucocytosis is dependent upon the reaction of the organism to the soluble products of the virus.

That the leucocytes can possess bacteria-killing powers is supported by Hankin's observations upon the lymphatic glands and spleens of refractory animals, in which he showed that from these organs, composed as they are largely of mature and immature leucocytes and the parent cells of the same, can be obtained a bactericidal substance acting specifically upon the microbes to which the animal was refractory. It is impossible for me to criticise Dr. Woodhead's objection to this—namely, that Dr. Wright has grown micro-organisms freely upon leucocytes—until the conditions of these experiments have been fully described.

To come now to the assumptions of bactericidal powers by blood serum, I would remark that, as Reuschenbach has shown, and as a matter of common experience, coagulation of the blood and production of serum is accompanied by a great disintegration of certain of the white corpuscles,* and I would suggest that to this disintegration is due the presence of bactericidal substances in the serum. Just as from fresh blood, and intact white corpuscles no fibrin ferment is obtainable, so it may be that the intact leucocytes do not *normally* contain bactericidal substances but precursors thereof. Possibly this is fitted to explain Dr. Woodhead's contention with reference to quinine.

I am unwilling that this working hypothesis whereby I have attempted to reconcile for the time being the divergent results of a host of capable workers should be dubbed a theory,

* Upon these points see fuller details given by Dr. Wright in the *Lancet* of February 27th.

still more do I regret that it should have been accredited to me; for while I have worked it out along my own lines, its origin is to be found in Mr. Hankin's work, and to all intents and purposes this is the hypothesis brought forward by Hankin at the International Congress of last year. If for no other reason, I am glad to join in this evening's discussion in order that honor may be given where honor is due.

Lastly, as to the way in which the leucocytes act upon the bacteria, I cannot help being impressed by the fact that the more perfect the methods employed the greater is the phagocytosis observable in the course of resolution of disease; and I must conclude that even though leucocytes have other methods of acting upon bacteria and their products, phagocytosis is a most important, probably the most important, factor in the production of immunity. Professor Burdon Sanderson's main objection—that leucocytes are to all intents and purposes independent organisms, and that, therefore, they cannot reasonably be expected to act in accordance with the needs of the organism—is, it seems to me, based upon the idea that the leucocytes are generation after generation propagated in the blood, free from the fixed cells of the body, But this is scarcely the accepted view. Very little mistosis of the leucocytes occurs in the blood, whereas the characteristic mistotic areas in the lymph glands offer an almost certain indication that the proliferation of leucocytes occurs in regions where the parent cells may be regarded as fixed, and capable of being influenced by nervous and other stimuli. It is to these parent cells, rather than to the free, motile leucocytes, with their short span of life, that we must look to explain continued powers of resistance to bacterial products on the part of leucocytes, the development of increased resistance, the development of immunity.

X.—T. J. BOKENHAM, L.R.C.P., M.R.C.S.,
Research Scholar British Medical Association.

Mr. Bokenham gave the results of some investigations on erysipelas which would have to be explained before the question of the causation of immunity could be settled: (1) Different effects of injecting cultures of true steptococcus erysipelatis into rabbits and guinea-pigs. Inoculation of a virulent culture into a rabbit's ear produced a typical spreading erysipelas without pus formation, though the lymph, whilst the process was advancing, was very rich in leucocytes. If some of this lymph were injected into a guinea-pig and another rabbit, the latter would contract a disease in every respect similar to that in the first rabbit, but nothing would happen to the guinea-pig. (2) Alteration of virulence of streptococcus erysipelatis under varied conditions: If a culture of streptococcus erysipelatis (too attenuated to produce the disease in a normal rabbit) were injected into one into which a simultaneous intraperitoneal injection of a sterilized culture of bacillus prodigiosus had been made, typical erysipelas would appear at the point of inoculation.

In this case a rabbit which was immune to the erysipelas of a low virulence was made susceptible, and inoculation from it to a normal one would produce the typical disease in the second; and, by continuing the process through successive rabbits, a very virulent form of erysipelas could be produced in which a highly infective disease occurred with generalized symptoms, though no reaction occurred at the point of inoculation. Here undoubtedly the local cellular infiltration seemed to have played some part in the localization of the disease. If a rabbit vaccinated against the bacillus pyocyaneus were inoculated with streptococcus erysipelatis, a general fatal infection occurred without local reaction at the seat of inoculation, but blood from this rabbit could only produce the local disease in a normal rabbit. Association of attenuated erysipelas with a common mould increased the virulence of the streptococcus both generally and locally.

HARD CHANCRE OF THE LIP AND SOFT CHANCRE OF THE GENITALS.

Dr. P. I. Messarosh relates, in the *Meditsinskoye Obozrenie*, No. 17, 1891, the case of a young man, 20 years of age, who presented himself at the Astrakhan General Hospital for treatment of a sore lip. Examination revealed the presence of a true Hunterian chancre on the upper lip, and also a soft chancre of the penis. The patient stated that he had accidentally bitten his lip some time before, and that soon thereafter a sore appeared which refused to heal in spite of numerous domestic remedies which he had applied. While the man was still under treatment a woman presented herself for treatment for syphilis. She was found to be suffering from general syphilis, having mucous patches in the mouth, and also from soft chancres in the vagina. This woman, it was subsequently ascertained, was the mistress of the other patient, with whom he had lived for several months, and from whom undoubtedly he had acquired his lesions.

PUNCTURED FRACTURE OF THE SKULL TREPHINE AND RECOVERY.

By A. D. BINKERD, M. D.,
WEST MONTEREY, PA.

On Sunday about 10 o'clock A. M., Sept. 13th, I was called to see H. L——, who had jumped from a rapidly moving train and sustained serious injury. He was picked up within fifteen minutes, unconscious and bleeding from a small scalp wound over the occipito-parietal suture, a little back and probably two inches above the tip of the ear on the left side of the head. It seems highly probably that the car struck the patient after he jumped, and that some sharp point produced the punctured fracture. There was a severe contusion of the deltoid muscle with abrasion of the skin on the upper third of the arm on the same side. Thorough examination discovered no fracture other than a small puncture and angular depression of both plates of the skull beneath and a little forward of the clean laceration of the scalp.

There were evident symptoms of both concussion and compression of the brain. The pulse was slow and feeble. Respiration twenty-four. The patient vomited and remained in a semi-comatose condition all night.

In the morning I telegraphed for Dr. R. S. Wallace, of East Brady. On his arrival he confirmed my diagnosis.

After a liberal use of Squibb's ether, Dr. W. proceeded to remove a button with the trephine, just beneath the puncture, but so sharp and angular was the depression that we found it impossible to raise the plates without removing them bodily, which we did.

Little spiculæ of the inner plate had been thrust into the dura mater. These were carecarefully removed. The hæmorrhage was profuse and the operation necessarily consumed considerable time owing to a scarcity of trained assistance.

When the work was done the convolutions of the brain were exposed, fully three cm. by two cm. in extent.

The hæmorrhage was kept under control and the integument brought into apposition by sutures, the whole being done antiseptically, as nearly as possible.

In due time the patient rallied from the anæsthetic, but symptoms of compression continued till the next day, when they gradually disappeared. There was perceptible dilatation of the pupil on the side of lesion.

Fifteen grains of the bromide of potassium with three drops of tincture of aconite root every three hours with cold compress were agreed upon as the treatment for the first few days. This was strictly carried out. Second day we began calomel, four grains every four hours; this was continued for several days, keeping a sharp lookout for the blue line. A low diet and absolute quiet were required. Kidneys acted well, but there was torpidity of the bowels.

About the fourth day fever began to rise. Temperature 104.° Pulse 120. Respiration 26. Symptoms of herniæ cerebri, so much dreaded by Dr. D. Hayes Agnew, began to threaten as a new complication. It now happened that we had a very hot day, being nearly the hottest in September. The effect upon the patient was severe and to some extent alarming. Arterial hæmorrhage was controlled with difficulty at one point only to burst forth anew at another with increased vigor. A tumor, the size of a hen's egg, had forced itself through the wound. This had little tendency to calm the fears of the friends and parents. Calling to my aid the "lost art" of phlebotomy, I took blood from the arm in a full stream, till the patient expressed relief from pain.

The battle for ascendency continued for four days and nights, when improvement began.

The bromide and aconite were continued. In due time the bowels were evacuated, and the secretions established. Milk and bread constituted the chief diet. A ripe peach was allowed daily, then ripe cantaloupe or musk melon. During the second week thoroughly boiled wheat served with cream and sugar aided in keeping up gentle action of the bowels.

Delirium and incoherence were controlled by fifteen grain doses of chloral hydrate with bromide. A three to five grain capsule of quin. sulph. daily constituted the tonic from the second week.

The wound was thoroughly cleansed twice daily with standard antiseptics. Very little suppuration occurred.

The dropping of the scalp over the abrupt edge of the skull now gave us some concern, and the effort to prevent this natural phenomenon by inserting a pin, and thus bridging the scalp, did not result in any apparent benefit to the cicatrice.

The wound had now diminished to the size of a large corn grain, but refused to recede farther. One day while cleansing the wound I discovered a hard white substance which I could not readily remove. The next day I took it away. It was a fragment of the inner plate $1\frac{1}{8}$ in. long and $\frac{3}{8}$ of an inch wide. Some ten days later I removed another small spicula.

The young man had begun to gain in weight, slept well, with increasing appetite, and had general good health.

Dizziness in walking was not a prominent feature. But he has as yet no recollection whatever of the occurrence of the accident.

The contusion of the shoulder resulted in resolution by suppuration, and showed a marked sluggishness in healing, yielding, finally to iodine injections supplemented by the seton.

This young man is 20 years of age, and was in robust health at the time of the accident. He has been at work in a rolling-mill in Pittsburgh since the first day of January, 1892, being less than four months after the occurrence of the accident.

Though we advised him strenuously against the resumption of physical labor till a considerable time had elapsed, he says he feels about as well as he ever did.

At this writing, careful inquiry elicits the fact that there exists a perceptible transudation from a small area beneath which it is highly probable a small fragment of dead bone still remains.

That the natural covering of the convolutions of the brain which we removed by the operation has been in part restored by analogous tissue is highly probable. Whether the process of restoration will continue to completion and possible compression of the subjacent convolutions of the brain, or whether the arch will be sufficiently concave to prevent such compression and its consequences, is the important point yet to be determined in this case— a point in which all brain surgeons must be vitally interested.

REPORT OF A CASE OF OVARIOTOMY.*

By DRS MARTIN AND CRAWFORD,
KAHOKA, MO.

Jan. 3d, Mrs. B——, aged 61, consulted Dr. Martin concerning a growth or tumor in the abdomen, which was of rapid growth and producing a variety of distressing symptoms. The abdomen was enlarged to the size of full term of gestation, the uterus was crowded down into the vagina; the breathing was interfered with from pressure against the diaphragm; the bladder could not be emptied except while in recumbent position, and the patient would then lift the tumor with her hands so as to remove the pressure from the neck of the bladder, and allow the urine to dribble away while in this position. These, with other distressing symptoms, were sufficient to cause the patient to willingly consent to the performance of an operation for the removal of the tumor, which we diagnosed an ovarian fibroid cyst.

We began to prepare her for the operation by giving her supporting and tonic treatment, with saline cathartics to free the bowels the day previous to the operation, enjoining daily baths and strict cleanliness of clothing and bed. On Jan. 14th, with the assistance of Dr. H. W. Stover, of Kansas, and other necessary help, we removed the tumor by first using all the care possible with regard to complete antisepsis, believing that success in all cases of laparotomy depends more upon thorough and complete antiseptic measures than any other one thing.

Our instruments and everything to be used were first placed in boiling water and afterward submerged in a solution of bichloride of mercury; the hands of operator and assistants were bathed in the same. The anæsthetic used was a combination of chloroform, ether and alcohol, one and a-half ounces of whisky being given a few minutes prior to administering the anæsthetic, which was given her while in bed. She was then placed on the operating table, and the operation commenced by making an incision from immediately below the umbilicus down to the linea alba to pubic arch, through integument, fascia and muscles to the peritoneum, waiting a few minutes to use sponge and ascertain if any vessels claimed attention. Just here we will say, that less than one ounce of blood was lost in the entire operation. The peritoneum was cut through and the tumor brought to view; it was found to be adherent to peritoneum and slightly so to intestines.

Notwithstanding the incision was six inches long, we decided to puncture the sack before removal, which we did and drew off about four quarts of gelatinous fluid, greyish in color and of the consistency of strained honey.

The adhesions were then broken up and the tumor lifted out of the abdomen by the hands of the operator; its attachment was then found to be the broad ligament on the right side of the uterus. The pedicle was two inches long and about two and one-half inches wide; we now passed a large needle, armed with double silk ligature, through centre of pedicle and tied from both sides. After which, we used a heavy ligature encircling the entire pedicle; we then excised and laid the tumor aside, sponged out the abdominal cavity, examined the stock to see if any bleeding ensued and immediately began to

*Read before the Tri-State Medical Society at Keokuk, March 1, 1892.

close the wound by fixing the pedicle at lower angle of incision and fixing it firmly there by pins and sutures; continuing sutures every inch or less until the incision was entirely closed.

After drying the body, we placed a layer of absorbent cotton, previously baked in the oven, over the incision and placed a bandage of new white flannel neatly about her and laid her back in bed where just thirty minutes before we had taken her out for the operation. She endured the anæsthetic well and the shock soon passed off, so that only a few minutes after she reached her bed she regained consciousness, and one hour later felt comfortable and took nourishment. We allowed no solid food for fifteen days, held the bowels in check for eight days, at which time we used injection and bowels responded nicely. The only medicine given was an anodyne of Tully's powder every ten or twelve hours; we saw her daily for seven or eight days and occasionally thereafter for the next three weeks. At no time did the temperature rise above 100°, and the pulse was at no time above 90. Soreness was slight from the beginning and no actual pain was experienced, the incision healed by first intention. Patient slept well and expressed herself as having felt more comfortable at the end of the first week than she had for seven months prior to the removal of the tumor. After ten days the patient began to sit up in bed, could turn herself without assistance, and now, at the end of thirty days, can walk about the house, and is entirely well.

We did not weigh the tumor, but believe it would, together with contents, have weighed 13 or 14 pounds. The usual weight of the patient is about 90 pounds.

APPOINTMENT OF RESIDENT PHYSICIANS AT EPISCOPAL HOSPITAL.

An examination for the position of resident physician in the Methodist Episcopal Hospital, of Philadelphia will be held on Tuesday, March 29th, 1892, at the hospital, Broad and Wolfe Sts., Philadelphia, at 8 p. m.

The examinations is open to both men and women; but applicants must, in accordance with the charter of the hospital have the degree of Bachelor of Arts. Two residents will be selected by the Trustees from the candidates who obtain the first four places in the examinations by the Medical Board.

Applications to be made to

Dr. John B. Roberts, 1627 Walnut St.
Dr. Richard C. Norris, 1028 Spruce St.
Dr. Wm. C. Hollopeter, 1408 N. 13th St.
Dr. H. H. Kynett, 1728 Spring Garden St.

SOME REMARKS ON SCARLET FEVER.*

By A. F. HEISING, M. D.,
MENOMINIE, WIS.

The etiology of this dreaded disease is no doubt due to a specific germ not yet perfectly isolated. The poison having entered the system either by ingestion or inhalation permeates the blood and the contents of the miliary vesicles, as experiments on healthy individuals prove. It has been observed that the contagion is manifested throughout the course of the disease, especially when desquamation takes place, the viability of the germ extending even from 5 to 8 weeks after the cessation of the disease.

When we speak of scarlet fever, we invariably consider it a disease of childhood, yet even adults, as your own experience proves, are not entirely exempt. Women in the puerperal state seem very susceptible to it, and I have no doubt that many a time a physician has mistaken this disease for some septic condition. Children having open wounds, as observation teaches, are more liable to take it.

It is a common opinion among the laity, that scarlet rash and scarlet fever are quite different diseases; yet in what really does the difference consist but in the intensity of the poison?

The prodroma are uncertain, usually a sudden chilliness with angina seems to initiate the disease, followed by vomiting and occasionally convulsions. On the second or even at the close of the first day a characteristic eruption of small red dots closely crowded together, makes its appearance, first on the chest and face, becoming general as the disease progresses, reaching its limit on the fourth and fifth day.

The temperature on the third day is usually the highest, subsiding from the fifth to the ninth day by lysis, unless other complications arise. Comparing pulse and temperature, the former is rather rapid. Next to the temperature, the throat symptoms are almost invariably present, although I have heard of cases in which they were absent. The severity of the throat symptoms may differ from an ordinary angina, with enlarged mucous follicles and suppurating portions of tonsil to the diphtheritic form.

Last spring diphtheria almost decimated its victims in our city, at the same time scarlet fever also prevailed, and I noticed that the throat symptoms of scarlet fever

*Read before the Inter-County Medical Society, March, 1892.

patients were by far more severe. I cannot help but think that many a time the two are closely allied, but in those cases assuming the diphtheric form, I never noticed the occasional paralysis which follows diphtheria. If a person can have diphtheria and scarlet fever simultaneously, one thing is certain, that while the scarlet fever is aggravated the characteristic diphtheria is mitigated.

Whether the Klebs'-Loeffler bacilli and those of scarlet fever antagonize each other, future experience and study will reveal. Bacteriologists teach us that we are surrounded by countless microbes, that almost threaten to devour us while our system is unaware. That they may be parasitic and thus antagonize one another, I would not be willing to say; but if this be true, that a person may have both diseases simultaneously and that one mitigates the other, who knows but many others may be found that will act in the same way and open up a new avenue of treatment?

The swelling of the glands in the neck, followed occasionally by an abscess, is of no rare occurrence, especially in the diphtheritic form. It seems strange that children having purulent otorrhœa after scarlet fever very seldom have meningitis.

Considering the elimination of the disease partly through the urinary tract, we ought to be prepared for the kidney complication, thus a timely examination of the urine in the third week may warn us of the approaching complication.

The fact that patients may have had the disease lightly does not vouch for the escape of nephritis. I remember a family in which eight children were taken down with the disease, one of the number had it very mildly, but he suffered with the worst uræmic convulsions and vomiting I ever saw, necessitating almost all medicines to be administered hypodermically.

I would call your attention to the fact that in the early stage of the nephritic complication, I have noticed pains in the abdomen opposite the kidneys. This may be misleading at times, yet it is a fact that pains are not always felt in the organs affected.

The pneumonia noticed in scarlet fever seemed to be more the result of kidney complication. Friëdlander has found that an acute nephritis of only a few weeks' duration resulted in hypertrophy of the left ventricle.

It is a peculiar fact that after desquamation there is occasionally articular rheumatism.

As to treatment, I suppose there is a great variety, nevertheless similar to a great extent in principle. As a preventive, I have tried *salol.* In some cases it seems to act perfectly well, while in others it is of no avail. In the early stages when marked symptoms of over-poisoning are manifested, I use potassium chlorate in doses to suit the age of patient every two or three hours. For the throat symptoms I use peroxide of hydrogen every two or three hours. Hot fomentations applied early to the swollen glands of the neck abort abscesses. For the fever, sponging with cold water or the cold pack whenever indicated. In order to be on the safe side, I usually give a mixture of digitalis and sweet spirits of nitre in doses to correspond with the age of the patient. This seems to cleanse the kidneys and thus many a complication may be avoided. This solution I also use in the case of nephritis. To prevent further contagion I order the patient to be anointed with carbolized vaseline, while all the clothes are either burnt or soaked in a suitable germicide solution. When the bowels are constipated calomel acts very nicely.

I may have omitted many points in the treatment, but in 70 cases I have lost but seven, three in the early stage from over-poisoning, two from nephritis, one from post-pharyngeal abscess, another died from some cause which I could not ascertain.

BRONCHITIS MIXTURES.

The following seasonable excerpts are from *Guy's Hospital Gazette:*

℞

Carbonate of ammonium	grains	16.
Syrup of tolu	fluid oz.	½.
Tincture of squill	minims	40.
Compound tinct. of cinchona	fluid drachms	2.
Spirit of chloroform	minims	4.
Rose-water	fluid oz.	2.

Mix. Dose, 1 fluid drachm every four hours.

Dr. J. Davies says of this that it is "stimulating expectorant in bronchitis and pneumonia."

Dr. W. T. Caldwell says that "for chronic bronchitis in old people, dispensed as a solution, preserved with a little spirit, the following is much preferred to taking as a pill. The quinine acts as a germicide, and the purulent discharge is removed."

℞

Sulphate quinine	grain	1.
Extract of hemlock	grains	3 to 5.
Dilute hydrobromic acid	minims	4.
Water to	fluid oz.	1.

Mix. Dose, 1 fluid oz. every four hours.

Another, of which Dr. R. Woods speaks highly, is:

℞

Tartarated antimony	grain	¼.
Spirit of chloroform	minims	12.
Tincture of opium	"	7.
Burnt sugar	grains	3.
Water to	fluid oz.	1.

Mix. Dose, 1 fluid oz. three times a day.

SELECTED FORMULÆ.

CONSUMPTION.

The following (*O Galenos*, Etos I, Arithmos 9) is praised for internal administration in pulmonary tuberculosis:

℞ Creasot. pur.....fl. ʒ j.
Spirit vini.....fl. ʒ iijss.
Vini Santorini.....fl. ʒ x.
Syrup simplicis.....fl. ʒ iljss.
A large spoonful three times a day.

ANTISEPTIC TREATMENT OF PTYRIASIS VERSICOLOR.

The pathogenic rôle of the *microsporon furfur* is secondary, the parasite developing only on the skin of dyspeptics affected with seborrhœa. Hence, there are two indications in the rational treatment of this affection.

General and Antidyspeptic Treatment.—(1) Encourage intestinal evacuations by purgatives, salicylate of magnesia, castor-oil. (2) Associate intestinal antiseptics with these purgatives and with alkalies.

℞ Bicarbonate of soda,
Salol,
Magnesia.....āā grammes 5.
Divide into fifteen powders and give one before each meal.

Local Antiseborrhœic and Parasiticide Treatment.—(1) Each morning hot lotions and frictions with green soap, allowing the foam to dry on, and subsequent cleansing bath with plenty of water. (2) Every second day, sulphur baths followed by frictions with green soap, with the addition of naphthol or pumice-stone.

℞ Green soap.....grammes 500.
Finely pulverized pumice-stone " 250.

(3) Daily antiseptic inunctions with the following mixture:

℞ Resorcin.....grammes 5 to 10.
Ol. ricini..... " 45.
Spt. vini rect..... " 150.
Bals. Peru.....centigr. 0·50.

or,

℞ Acid. salicylic.....grammes 2 to 3.
Sulph. precip..... " 10 to 15.
Lanolin..... " 70.
Vaseline..... " 18.

—*Revue Gén. de Clin. et de Thérap.*, No. 49, 1891.

RHEUMATISM.

The following prescription is a good combination in rheumatism. I have tested it personally, and know whereof I speak:

℞ Pot. iodide.....ʒ iiss.
Tr. cimicifuga.....ʒ iss.
Vin. colch. sem.....ʒ j.
Fl. ext. henbane.....ʒ ss.
Simple syrup.....ʒ v.
M. Sig. Teaspoonful well diluted with water every four hours.

Dr. Conger, in N. E. Med. Monthly.

OTALGIA.

In otalgia the following (*Ugeskrift for Læger*, Nos. 28 and 29, 1891) is recommended:

℞ Chloral camphor.....grammes 5.
Glycerine..... " 30.
Ol. am gdal. dulc..... " 10.
Dip a pledget of cotton into this mixture and introduce it into the meatus.

MONIN'S KOLA ESSENCE STIMULANT.

Essence of kola (roasted).....Gramme 40.
Tincture of canella..... " 5.
Essence of peppermint.....gtt. 10.
Flavor, mucilage.....ad. lib.
Water, enough to make.....Gramme 150
This is to be consumed in 24 hours.

—*Bulletin Medicale.*

EMMENAGOGUE.

The following is recommended as a reliable emmenagogue in many cases of functional amenorrhœa:

℞ Bichloride of mercury,
Arsenite of sodium.....āā gr. iij.
Sulphate of strychnine..... " iss.
Carbonate of potassium,
Sulphate of iron.....āā " xlv.
Mix, and divide into 60 pills. Sig. One pill after each meal.

—*Revue de Médico-Chirurgicale des Maladies des Femmes; Times and Register.*

CHLOROFORM SALVE FOR LOCAL ANÆSTHESIA.

Dr. Kittel (*La Independencia Medica*, No. 42, 1891) uses the following:

℞ Chloroform.....part 1.
Ceræ..... " 1.
Adipis.....parts 3.

APPETIZING TONIC.

℞ Quiniæ sulph.,
Ferri citr.....āā ʒ ss.
M. Ft. capsulæ No. 40. Sig. One after meals.

DIARRHŒA OF CHILDREN.

Dr. E. M. Sympson (*La Semaine médical*, No. 59, 1891) recommends the following:

℞ Borax.....grammes 4.
Glycerin. pur..... " 16.
Tint corticis aurant..... " 3.
Aq. destillat..... " 60.
A teaspoonful every one to three hours.

This is not only an excellent anti-diarrhœic, but also quiets the colic.

WHOOPING-COUGH.

Dr. Schmid (*Lo Sperimentale*, No. 21, 1891) uses the following in a spray with success in cases of pertussis:

℞ Acid carbolic.....grammes 0.03.
Sol. menthol (4 per cent.)..... " 20.
Sol. cocain. (3 per cent.)..... " 15.
Aq. lauroceras..... " 60.
Spray the child's throat once an hour, or even oftener.

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LEADING ARTICLE.

THE INFECTIOUSNESS, CONTAGIOUSNESS, AND HEREDITY OF LEPROSY.

Professor A. von Bergmann contributes to the *Sammlung klinische Vortraege* an article, which is an interesting and valuable exposition of this subject which has of late been brought so forcibly to our attention, both by the press and clinical experience in the larger cities of the United States.

In the city of New York the subject of the contagiousness of leprosy has become of such importance that the authorities have seen fit to place the matter under investigation, and have decided that the bulk of the evidence goes to answer the question in the affirmative. However, in this decision, no discrimination has been made between what is known as tuberculous leprosy and the variety known as anæsthetic leprosy. There are many authorities whose words cannot be disregarded, who look upon leprosy rather as infectious than contagious.

A. von Bergmann, living as he does in a locality rich in lepra material, has had such a vast experience that his views demand attention. He starts out by saying that he has placed together all cases which came under his consideration without any distinction between the tubercular and the nervous varieties, and as an excuse for this he quotes Danielssen, Dehio, and Gerlach, who consider the scales which come away from the skin in this affection to be parts of a specific lepra tissue. The main distinction between lepra nervorum and lepra tuberosa that he makes is the length of the course which the disease runs; the former lasting often more than twenty years, and the latter ranging from four to twelve years. In contradistinction to these views, we have Kaposi, who at the Tenth International Congress maintained from a practical standpoint the non-contagiousness of leprosy.

Von Bergmann asks: How do the anti-contagionists explain the spread of leprosy? And then goes on to say, "In the first place, through inheritance, next through spontaneous generation, poverty, scant food, special

rancid oil, spoiled and raw fish-roe, and especially from fish food. Hutchinson is a most zealous supporter of the fish nutrition theory, and finds disciples in such men as Hillis, Zambaco, Sandreczki, Wyndham and Cottle. Hutchinson reports more than twelve cases that he observed in London, which without exception emanated from leprous regions and who ran the risk of eating fish, especially salt fish. The beginning of the fish theory dates back to Avicenna. Danielssen and Boeck have investigated fish in Norway which had been attributed as a cause of leprosy, and have between them found examples which possess greater and smaller nodes, and they point to an undoubted relation to the lepra tuberosa. Exact investigation proves that we have to deal here with vegetable parasites.

Petersen and S. Moore allege that on the other hand leprosy appears in people who are remote from the sea, and who never even see a fish. We can, therefore, well pass over the fish theory as long as supporters of the same can bring forth no definite data for the support of the truthfulness of their speculation.

Dr. Bergmann likewise disregards the theory that leprosy is due to extreme poverty on account of the lack of sufficient and exact data to support the theory, and goes on to to say that inheritance of leprosy is considered by most of the auto-contagionists as the chief factor to induce the spread of leprosy.

Kaurin, Carter and A. Wernich have worked out the percentage of hereditary leprosy in Norway, Katywar, East India and Japan. Kaurin finds of the cases of leprosy in Norway 30 per cent. are hereditary. Carter likewise in Katywar finds it to be 30 per cent. A. Wernich finds that hereditary leprosy in Japan is 40 per cent. Out of 107 cases reported by English physicians, in the East India service, 69 cases are put down as undoubtedly hereditary. On the other hand, there are Armauer Hausen and Leloir, Bidenkap, Pr. A. Marrow, J. de Arazedo Lima and many others, who consider that hereditary leprosy can seldom be traced. *A priori*, it is easy to see, that the conditions for the hereditary transmission of leprosy are favorable. The *potentia coëundi* appears in lepers first in advanced stages. The testicles of lepers are very frequently the seat of bacilli and the same has been found by Cornil, Neisser, Hansen and Leloir in the seminal duct. Neisser and Leloir have in a single case found bacilli in the coni vasculosi Halleri. Accordingly it appears that the transmission undoubtedly takes place through the medium of the spermatic fluid.

In a book written by Danielssen and Boeck, in a table of 145 cases of lepra tuberosa, it is shown that 127 cases of the disease were due to inheritance, only 43 were in a direct line of transmission. From these 43 direct cases of inheritance 13 are entirely in the first generation, 25 came from grandparents, one comes from the third and four from the fourth generation. In 145 cases of leprosy, in only 13 cases were the parents leprous; this makes scarcely 9 per cent. A table of 68 cases of lepra nervorum, shows about 10 per cent. of cases in which the parents were leprous. Naturally there are doubtful cases as to the heredity and as to the contagiousness of the disease.

The greatest hindrance to an understanding of the contagiousness of leprosy is conclusively offered in the question of the length of the period of incubation. This period is long, from four to five years intervening between the exposure and the outbreak of the disease.

These cases of direct and indirect transmission are but a handful from the rich material which Von Bergmann has collected. He has handled the matter in a thoroughly scientific way, and the bulk of the evidence from his own cases goes to show that leprosy is contagious and hereditary. He has devoted considerable space to the method of infection, quoting inculation experiments upon animals made with blood taken from leprous patients. In every case of inoculation of the lower animals the results have been negative; of course, the factor of the long period of incubation must not be lost sight of here, even as in other specific granulomata the animal often dying long before the disease has had time to manifest itself.

He has very little to say in regard to the bacillus of leprosy as being its cause, and seems to attach but very little importance to it as a diagnostic factor. After placing all his cases in a table he describes them both separately and in groups and closes his article as follows: "The longer and the more critically that I collect the histories of lepers the easier it is to prove that cases are related that at first appeared isolated. However, it may readily be perceived that these cases furnish a practical support for the theory of transmission of leprosy, for in 60 per cent. of the cases contagiousness is undoubtedly established; in others presumably so. Think of all the cases of diphtheria, scarlet fever, small-pox, *et cetera*, that you come upon in your practice as isolated cases, where in spite of every endeavor you are not enabled to establish the source of infection; also consider the experience which we have had in chronic infective diseases. No one today considers it a proof against the transmission of syphilis, if a syphilitic man inoculates neither wife nor children. Why should it be held for a proof of the transmission of leprosy that man in each case must share his leprosy with his wife. Our material can also be brought to support the length of the period of incubation of leprosy. In not a single case does the same fall below three years, the majority of the cases ranging between four and five years. I believe as soon as the long period of incubation is established, the opposition against its transmission will be silenced."

THE DEATH OF DR. D. HAYES AGNEW.

Dr. D. Hayes Agnew, the greatest American surgeon, died on Tuesday, March 22d, and was buried on Friday, March 25th. An obituary notice will appear in a subsequent issue of the REPORTER.

IT is claimed by good authority that two infectious diseases can exist in the same person at the same time.

BOOK REVIEWS.

TREATISE ON GYNÆCOLOGY, MEDICAL AND SURGICAL, BY S. POZZI, M. D., Prof. Agrégé à la Faculté de Médecine, Paris, etc. Translated from the French edition under the supervision of, and with additions by, BROOKS H. WELLS, M. D., Lecturer on Gynæcology at the New York Polyclinic, etc. Vol. I. Large 8vo, pp. xxiii—581 Illustrated with 305 wood engravings, and 6 full-page plates in color. New York: Willliam Wood & Co., 1891.

The task of the reviewer of this work is a most agreable one. Judging the whole work by the first volume, it is the most important addition to gynæcological literature in recent years. The most striking feature of it is, that it is distinctly in touch with current thought; its matter is neither obsolete nor obsolescent, but everywhere represents what is good in modern progressive gynæcology. Another striking feature is that it is French, and that it sets forth the work of the French in diseases of women from the dark ages down to the present time. The work of all nations is duly credited and with a broad, liberal spirit, but as a true Frenchman, the author never loses an opportunity to bring the work of his countrymen into prominence. This fact gives an added value to the work. Because of the long silence of French writers on gynæcology during the time when writers of other nations have been so prolific, we have rather forgotten the good work which France has done in this department of medicine, and it is well to have the facts recalled to our attention.

Chapter I. treats of antisepsis in gynæcology. This is a useful innovation, as bringing prominently to the attention of the reader the importance of the subject. The only criticism upon this very full chapter is that the editor should have added notes on the use of the steam sterilizer for the sterilization of instruments and dressings; and also the use of sterilized water to cover the instruments during operations, instead of the carbolic solutions. These improvements in technique have become general since the chapter was written by the author. Chapter II. treats of anæsthesia, Chapter III. of methods of suture and hæmostasis, Chapter IV. of methods of gynæcological examinations, each being systematically written. The author still clings to the routine use of the sound and to the use of the tents for dilating the cervix, but the dangers of the practice are pointed out.

Chapter V. discusses metritis, under which head is embraced metritis and endometritis, and laceration and erosion of the cervix.

The classification is adopted because of unity in the ætiology of the conditions—all being inflammatory and due to germ infection. To those who have admitted subinvolution, congestion, and hyperplasia from congestion, and especially those who with Thomas and Emmet have combated the theory as to the inflammatory character of metritis, this classification comes as a shock. The author can easily fortify his position with proofs. For example, subinvolution is almost always due to infection in child-bed, and the condititions brought about by long continued congestion are favorable to infection. As to the primary cause of the conditions embraced under the title "Metritis," being infection in all cases, the author certainly goes too far. Early rising from the lying-in bed can cause subinvolution, displacement of the uterus, and subsequent metritis (a late infection ?). Here the primary cause is not infection, and it is well known that the large hyperplastic uterus is usually found in poor women who bore babies at short intervals, and who go to work while the uterus is still subinvolved. And these illustrations might be extended, by studying the endometritis accompanying fibriods, etc.

The author is a strong advocate of the curette in chronic endometritis when it is complicated, the curetting to be done under strict asepsis. This method of treatment is coming more and more into favor.

The relations between inflammation of the uterus and the uterine appendages are more definitely stated than in any other systematic treatise.

Chapters viii–xvi treat of uterine fibroids and cancer. Chapters xvii–xix, contain 104 pages, treating of displacements of the uterus in a specially complete and admirable manner. It is to be regretted, however, that an exception must be made in the chapter on prolapse of the genital organs. The relation of the injuries of the pelvic floor to prolapse of the pelvic viscera is scarcely hinted at, and yet these injuries are almost always the direct cause of the prolapse. Apparently the author is not familiar with Emmet's operation on the perineum, as he makes no mention of it.

Chapters xx–xxii are devoted to inversion of the uterus, certain deformities on the cervix and uterus, and to disorders of menstruation. The two points in treatment which will not commend themselves to most American readers are the use of tents to secure dilatation of the cervix, and the use of the syringe in making intra-uterine applications. The dangers of the tent as compared with the steel dilator should prevent its employment. The author uses the uterine syringe only after preliminary dilatation and curetting, under which conditions its use is a very different procedure than when the cervical canal is of normal calibre.

The notes of the editor are valuable, and reflect great credit. Unquestionably he has placed the profession under obligations to him for this admirable translation of Pözzi's great work.

CORRESPONDENCE.

THE CHEMICAL STUDY OF THE ÆTIOLOGY OF SUMMER DIARRHŒA IN CHILDREN.

Editor of the Medical and Surgical Reporter :—In your issue Oct. 17th, 1891, page 637, there is an article under the above title, translated from the Italian, and credited to the investigations of Varyas. This is from an article which was read by me before the American Pædiatric Society in June, 1890, and was published in the transactions of that society and in the Archives of Pædiatrics date of Oct. 24th, 1891.

That the article is a translation and condensation of my paper will be evident to any one who will compare the two.

Victor C. Vaughan,
Ann Arbor, Mich.

FLORENCE REDIVIVUS.

A striking example of the beneficent influence of sanitary reforms on the health of cities is afforded by a study of Florentine death-rates before and after the improvements which have been carried out of late years. The ameliorations have consisted for the most part in the prevention of floods, the suppression of private slaughter-houses, and a better water-supply, together with sundry house and street improvements. These are still in progress, but on comparing the death-rate from 1818 to 1877, equal to 34.6 per 1,000, to that of the years in which unsanitary conditions were being dealt with, we find that the returns fall successively to 32.8, 28.6, and, in 1890, to 2g.3, and this in spite of a severe epidemic of typhoid fever during last year. It is worthy of note that a similar epidemic occurred at Pisa about the same time with a mortality of 3.75 per 1,000, while at Florence it was only 1.279. According to Sir Douglas Galton, under whose superintendence these works have been carried out to a large extent, Florence only needs a more efficient system of drainage to make it the healthiest city, not only of Europe, but of the world.

PERISCOPE.

THERAPEUTICS.

THE GERM THEORY OF DIPHTHERIA FROM A THERAPEUTIC POINT OF VIEW.

According to the *Bulletin Géneral de Thérapeutique*, October 30, 1891, Dr. Jacques, of Marseilles, promulgates the following doctrine: While diphtheria is due to a specific germ from which emanate toxic properties, causing various disorders in their journey through the economy, the germ itself exists only in false membranes, and does not penetrate the blood or organs. The mouth and false membranes contain other micro-organisms beside the specific diphtheritic germ. Gargles are recommended every hour, first of perchloride of iron in solution, followed by washing the throat with warm water containing three parts boracic acid to every hundred parts water; and the alternate hour, a gargle of carbolic solution, 1 to 100, without washing the throat afterward. For very young children powders may take the place of gargles.

PROPHYLAXIS AND TREATMENT OF INFLUENZA.

Cyrus Edson, of the Health Department of the City of New York, publishes a monograph on "*La Grippe* and its Treatment." Three indications are to be fulfilled: (1) means must be taken to assist the system to rid itself of the poison to which the attack is due; (2) pain must be relieved; and, (3) not the least important, depression must be counteracted. The first indication is obtained by means of castor oil or 2 compound rhubarb pills. Three or four 3-grain powders of phenacetin are usually sufficient to relieve headache and muscular pains. Salol, 2½ grains to each dose, may be added to the phenacetin with advantage. He deprecates antipyrin and its congerers, which serve to augment the depression, and recommends instead Hoffman's anodyne, which is diaphoretic, diuretic, and stimulant. To overcome depression during and after the disease, he recommends the free use of tonics. He repeats Professor Laffont's (of Lille) recommendation of coca preparations, those of Mariani being given the preference. During the disease a hot grog, one-third Mariani wine of coca and two-thirds sweetened water, is administered, taken very hot, several times a day, the slight diaphoresis induced being a valuable addition to the tonic.

Edson considers champagne, generous wines, tonic doses of quinine, iron and strychnia also of value. The catarrhal irritation of the air-passages are best allayed by inhalations of compound tincture of benzoin. Chloroform liniment is recommended as a rubefacient; opium and carbonate of ammonia for the cough. The treatment of pneumonic *grippe* is essentially the same as that of uncomplicated pneumonia, the author emphasizing the advisability of preserving the strength of the patients.

TREATMENT OF ACUTE CORYZA.

Capitan, in *Médicine Moderne*, No. 46, 1891, recommends the following powder, which, he says, arrests generally, almost immediately, a commencing coryza, if from the very onset the patient takes pains to snuff up a pinch into each nostril, and draw it in deeply:

℞ Salol..... 1 gramme
Salicylic acid.....20 centigrammes,
Tannin.....10 "
Powdered boric acid..... 4 grammes. M.

Take a pinch every hour for half a day, and then discontinue the use of this snuff, for if it be persevered with it may cause an eczematous eruption on the margins of the nostrils from the action of the phenic acid formed from decomposition of the salol.

Another snuff-powder by the same writer is recommended as being similar in its action to the preceding, but less powerful:

℞ Powder of talc..... 5 grammes,
Antipyrine..... 1 "
Pulv. boracic acid..... 2 "
Salicylic acid.....25 centigrammes. M.

This powder may be snuffed up the nostrils without fear of irritation.

M. Tessier, in the *Annales de Médicine*, indicates several formulæ for the treatment of this affection. The following is a mixture for inhalation:

℞ Acid carbolic fort..... 5 grammes,
Liquor ammon. fort ..... 5 "
Water..... ...15 "
Alcohol.....15 " M.

Pour a few drops on blotting paper and inhale for a few seconds. In some cases, chloroform or tincture of camphor may be advantageously substituted for the water in the above.

Dobson, in the *Lancet*, May 31, 1884, advises respiration of camphor coarsely powdered and placed in a jug of boiling water as an effective remedy against coryza. "About one drachm of camphor should be added to half a pint of fluid, and the steam thus impregnated should be inhaled slowly ten minutes every hour, repeating it three or four

times, when the nasal inflammation will be much relieved. The jug containing the water as well as the face of the patient must be surrounded with a paper cone during the period of inhalation.

The following formula is recommended by Dr. Beverley Robinson:

℞ Pulv. fol. belladonnæ..... .....ʒ i.
Pulv. morph. sulph.....gr. ij.
Pulv. gum acaciæ, ad .....ʒ ss. M.
Sig. Use with the powder-blower for anterior and posterior nares.

This powder should be blown through the nose both anteriorly and posteriorly so as to coat over the mucous membrane lining the nasal passages very thoroughly. "Its most noticeable action is to diminish the congested condition of the interior of the nose, so as to permit freer passage of the inspired and expired current of air. This it does, doubtless, by contracting the small blood-vessels and lessening the amount of watery fluid which exudes from them into the cellular structure. Besides all three agents, morphia, belladonna and gum are decidedly antiphlogistic in their action upon the inflamed pituitary."

Dr. Morell Mackenzie advises the following snuff, which is to be used from the commencement of the cold, but never longer than twenty-four hours:

℞ Morph. sulph.....12 centigrammes,
Subnitrate of bismuth.....3 gr. 50. M.

To conclude: A person who is conscious of having taken a cold in the head should take his room and resort for relief to some one of the measures of local treatment above given. For internal medication we do not think that much confidence is to be placed in the small doses of atropine or the larger doses of quinine advised by some authorities. If there be a furred tongue and a deranged state of the *primæ viæ*, a saline laxative, a full dose of rhubarb and soda, or even a cholagogue cathartic may be indicated. Hourly doses (one drop) of tincture of aconite may be given, or two or three five-grain doses of acetanilid two hours apart, or two ten-grain doses of phenacetin at the same or a longer interval, if there be considerable fever and headache. It is worse than useless to take any other nourishment than a little hot liquid food till the acute symptoms have somewhat subsided. General diaphoresis will seldom be advisable for a simple coryza. Dover's powder is apt to disturb the stomach and constipate, and can seldom be required. Antimonials, jaborandi and pilocarpine are not to be thought of. A teaspoonful every two hours of aromatic spirits of ammonia can do no harm; or two or three drops of the liquor morph. sulph. along with two and a half grains of ammonium carbonate every hour for six hours, and afterwards every hour and a half. According to Phillips, a few drops of the tincture of euphrasia officinalis (eye-bright) taken at the beginning of the attack of acute coryza, and repeated every two or three hours will often abort it, and this treatment is endorsed by Dr. G. M. Garland.—*Boston Med. Surg. Jour.*

DUBOISIN AS A SEDATIVE AND HYPNOTIC.

Dr. Ostermayer (*Allgemeine Zeitschrift für Psych.*) regards the sulphate of duboisin as superior to hyoscine, in not having the inconveniences of the latter drug. It is chiefly a hypnotic, producing sleep in from twenty to thirty minutes, and is to be given in doses varying from one to three milligrammes, according to the character of the case. It is said to produce no dangerous or disagreeable symptoms, and although continuous use produces tolerance, by leaving it off for a short time the full effect can be obtained.—*Lancet.*

COPAIBA BALSAM AS A DIURETIC.

Following up Obolensky's researches on the diuretic effect of balsam of copaiba (see Supplement, August 8th, 1891, p. 45), M. I. Svetükhin (*Vratch*, No. 35, 1891) has come to the following conclusions: 1. Copaiba balsam undoubtedly has a very powerful diuretic action. 2. It induces an abundant diuresis not only in cases in which the daily quantity of the urine has previously been subnormal, but even where the quantity has been oscillating within normal limits. 3. The remedy is equally reliable in cases of cardiac, hepatic, and renal diseases, as well as in arterio-sclerosis and serous pleurisy. 4. Under the influence of the drug serous pleuritic effusions are rapidly absorbed. 5. Neither the arterial tension nor the pulse curve shows any alteration. 6. The diuretic effects are usually obtained even on the administration of 5-grain doses thrice daily; 10-grain doses, given three or four times a day, should be regarded as medium ones; 10 or 15-grain doses, given every two hours, as large ones. 7. Neither the small nor the medium doses ever give rise to gastro-intestinal disturbance or renal irritation. If albuminuria is present they never increase the proportion of albumen in the urine. 8. Given by intravenous injection to healthy dogs, copaiba balsam augments the daily quantity of the urine, but has no effect on the blood pressure.—*Brit. Med. Jour.*

MEDICINE.

CATGUT INFECTION IN THE DRY TREATMENT OF WOUNDS.

Brunner, in *Langenbeck's Archives*, Bd. 42, Heft III, replies to the article of P. Klemm, in the same journal, Bd. 41, which was abstracted in the July issue of the *University Medical Magizine*. He says the conclusions of Klemm are in direct opposition to those he himself had submitted in the *Beiträge zur klinische Chirurgie*, Bd. 6, Heft I. Klemm favored the use of silk, and argued against the asepticity of catgut, quoting the remarks of Bazzini and Biondi at the Italian Surgical Congress in his support. The author cites Novaro, Postempski and Bonnano as upholding his views at the same meeting, particularly the latter, and says that when suppuration occurs in the track of a deep catgut suturé it soon stops with absorption of the suture, but if silk is used it persists until the thread is removed. Both silk and catgut, when buried in the tissues, produce a local disturbance favoring the development of organisms, but the catgut less than the silk, because it remains there a shorter time. Such infection, when it occurs, he attributes to outside sources and not to the catgut itself. Klemm claimed that his experiments showed that silk sutures were less liable to provoke suppuration than catgut ones. To this Brunner replies that the experiments were too few in number, and recalls the failures of Lister, Socin, Mosetig, Kocher and nine other operators with silk ligatures; also, the report on its use in Billroth's clinic by Von Eiselberg to the same effect. That catgut, as a rule, heals readily in deep wounds has been too often demonstrated by experiments to be overthrown by the four experiment of Klemm. The twenty experiments in which the author buried catgut which had been infected with the germs of splenic fever, and then sterilized, were not noticed by Klemm. Catgut has been used in the Zurich clinic for ten years with good results. Socin gives twenty-three cases of extirpation of goitre in which buried catgut sutures were frequently used with perfect satisfaction; also, Kappeler writes that he, too, has good results in its use. Brunner concludes as follows: Any method of wound treatment which does not preserve the sterile catgut from secondary infection is inefficient, and all the more so if drainage is dispensed with; if lack of proper disinfection of the catgut is such a cause of failure as Klemm holds, then we ought to have them occurring as a rule and not the exception. Catgut will retain its place in surgery along with silk, but it should only be used after being thoroughly soaked in an efficient disinfectant, and not employed when simply sterilized by heat alone.—*Univ. Med. Mag.*

PATHOLOGY OF PROTEIDS.

S. Martin (*Brit. Med. Jour.*, January 1, 1891; *Jour. Chem. Soc.*, 60, 761). The changes in structure that occur in a diseased tissue or organ are associated with chemical changes, and it is to certain changes in the proteids, the most abundant constituent of most living structures, that attention was chiefly directed in the present research; although peptones and albumoses are found in the alimentary canal, their presence elsewhere in the body is pathological, as during normal absorption they are regenerated into the blood proteids. The action of microörganisms during putrefaction is, first, similar to that of pepsin, namely: it forms albumoses and peptones, but, subsequently, ptomaines may make their appearance. Putrefaction (using the word in the wide sense of the changes due to microbes) is, moreover, a frequent factor in pathological processes, and albumoses and peptones are poisonous substances. If these poisons are found in decomposing collections of cells, as in abscesses, empyema, phthisis, etc., they pass into the lymph and blood-streams, passing ultimately from the body by the urine, constituting what is generally termed peptonuria, but which should be more properly called albumosuria, the proteid which is present being deutero-albumose; Illustrative cases are cited which show the amount of albumose in the pus and in the urine before and after the evacuation of the abscess, the albumose in the urine varying with the amount of accumulated pus.

One of the most striking features of pus-formation which is common to it and albumose poisoning is fever. It is possible that other factors have also to be considered; thus leucine, often found in pus, is a fever producer; alkaloids, if they do exist, have yet to be isolated.

In ordinary pus, the agent which forms the albumoses is probably not an euzyme, but the *staphylococcus pyogenes aureus;* in tubercle, it may be the tubercle bacillus.

But the presence of albumoses in disease cannot always be ascribed to microörganisms, as in glycosuria and osteomalacia. In osteomalacia the diseased bones contain an albumose similar to that execreted in the urine, and, perhaps, due to the rapid breaking down of lowly organized cells. In the

puerperal state, the origin of the albumose may be the degenerating cells of the hypertrophied uterus which is undergoing involution. The origin of albumoses in other cases, such as measles, is at present involved in obscurity.

NEURASTHENIA AND VARICOCELE.

Dr. Wiederhold has observed quite a number of cases of neurasthenia which were evidently caused by varicocele, since treatment directed toward the latter disease effected such a marked improvement of the neurasthenia as was not observed to follow the treatment of neurasthenia uncomplicated by varicocele.

The cases of neurasthenia accompanied by varicocele were divided into two groups:

The first group was characterized by decreased mental powers. The patients (mostly young adults not particularly given to excesses) suddenly broke down at a time when their mental powers were taxed a little more than usual. They would sit for hours before an open book without comprehending what they were mechanically reading. Their physical powers were also much impaired, even the slightest exertion causing great fatigue. The sexual organs exhibited signs of irritable weakness. They were almost always excited, while coitus was impeded on account of premature ejaculation or incomplete erection.

Accompanying the above symptoms was great mental depression and despondency, leading at times to thoughts of suicide.

In another group of cases the psychical symptoms were less marked, while symptoms referred to the periphery of the nerves were prominent. Neuralgias, especially of the intercostal nerves, were frequent. Other symptoms were irregular heat, dyspepsia, paræsthesia, deafness, a feeling of heat or cold in particular limbs, increased sweating on the side of the body on which the varicocele was located.

The treatment, directed towards the varicocele which effected such prompt amelioration of the neurasthenia, consisted of electricity, hydrotherapy, and mechanical support by means of a suspensory. Surgical means were altogether omitted as the patients were treated in a hospital for nervous diseases.

The treatment employed is supposed to have relieved the varicocele by restoring the tone of the dilated veins.—*Deut. Med. Woch.*

Have sick room well lighted—sun light.

SURGERY.

COCAINE ANÆSTHESIA FOR ENUCLEATION OF THE EYE.

Dr. Edward Jackson, in an article in the *Annals of Ophthalmology*, says: While cocainization has replaced general anæsthesia for the great majority of the operations done in opththalmic practice, the limits of its usefulness in that indicated by the heading of this paper are not entirely settled. Probably most surgeons regard enucleation of the eye as always calling for the use of a general anæsthetic, but a few report that they do the operation with the aid of cocaine anæsthesia alone.

The writer's experience in this direction began with the attempted enucleation of an eye long blind, containing a foreign body, and which had become violently inflamed a few weeks before, and had caused sympathetic irritation in the other eye. A four per cent. solution of cocaine of proved efficiency was freely instilled in the conjunctival sac, and then injected into the orbital tissues with a hypodermic syringe with a freedom that would now be considered dangerous. The patient was a strong young laboring man, and the operation carried forward as rapidly as possible; but the evidently intense suffering of the patient led to the completion of the enucleation under chloroform.

This was in the early weeks of our acquaintance with cocaine as an anæsthetic, and the one experience led the writer not to make a second attempt for some years. As we became more familiar with the effects of the drug, however, it was noticed that its power of producing insensibility was very slight when the tissues to which it was applied were actively hyperæmic or inflamed; and the idea occurred to the writer that probably this was the explanation of the failure in the above case. Its very satisfactory influence for tenotomy or advanced operations made it seem probable that with the tissues in a similar condition of freedom from hyperæmia it should answer for the enucleation of the globe. A patient requiring the enucleation of a globe quite free from hyperæmia, and desirous of avoiding the use of ether, offered the opportunity for another trial. In this case the result was perfectly satisfactory, there being no complaint or evidence of severe pain. Certainly the pain was less than in the average operation for advancement of tendon.

From that time the writer has used cocaine for the enucleation of all eyes free from

hyperæmia, and has encountered but little more difficulty and caused but little more suffering than attends an ordinary squint operation. For the enucleation of hyperæmic eyes, which are a majority of those requiring enucleation, the use of ether is still resorted to.

For enucleation, cocaine is to used very much the same as for an advancement, but more freely. A four per cent. solution is instilled freely into the conjunctival sac at intervals of two or three minutes, for fifteen or twenty minutes before the operation is commenced. During the operation the cut tissues may also be bathed with the solution, but this part of its use is comparatively unimportant. No attempt is made to inject it in the deeper tissues. The most painful part of the operation is, as in squint operations, the dragging on the tendons of the recti muscles. And the total pain caused will depend mainly on the gentleness or rudeness exhibited in this portion of the operation.

INSTILLATIONS OF NITRATE OF SILVER IN THE TREATMENT OF EPIDIDYMITIS.

Dr. Samuel Alexander calls attention to the value of instillation of nitrate of silver in the posterior urethra to prevent recurrence of the epididymitis, and to hasten the course of the original disease. He does not claim originality in this method which he ascribes to Diday, but insists on its beneficial effects. His plan is to commence as soon as possible with the instillations. The patient is placed in bed, given a subcutaneous injection of morphine if the symptoms are very acute, and then with Keyes' modification of the Ultzman syringe an injection in given just within the membranous urethra. The strength of the solution should vary from 1 gr. to the ounce, if the symptoms are very acute, to 8 gr. to the ounce, and the injection must be repeated at intervals of 24 to 48 hours. During this treatment the testicle should be supported and poulticed with flaxseed. Later, the dry dressing of cotton-wool, vaseline, and rubber tissue covering should be employed. The injection should be made soon after the patient has passed his water, so that there may be as little secretion as possible in the urethra. The advantages as summed up by Dr. Alexander are: (1) The lessened liability to relapse. (2) The shorter coure of the disease. (3) The shortening of the duration of the accompanying urethritis, because treatment of the posterior urethra is continued during the existence of the epididymitis.—*Journal Cutaneous and Genito-Urinary Diseases*, December, 1891.

EPISTAXIS: AN EASY AND EFFECTUAL METHOD OF PLUGGING.

Dr. A. A. Philip writes in the *Lancet*: Uudoubtedly plugging the nares by aid of Bellocq's cannula is an excellent method; but occasionally, especially in country practice, Bellocq's cannula is not at hand, and some method easy, effectual, and effected by material alwasy within reach, must be resorted to. Such a method I have found in the following: A piece of old, soft, thin cotton or silk, or oiled silk, about six inches square (a piece of an old handkerchief will answer) is taken, and, by means of a probe, metal thermometer case, or pen-holder, or anything handy, is pushed centre first, "umbrella" fashion, into the nostril, the direction of pressure when the patient is sitting erect being backwards and slightly downwards. It is pushed on in this fashion until it is felt that the point of the "umbrella" is well into the cavity of the naso-pharynx. The thermometer case or probe, or whatever has been employed, is now pushed on in an upward direction and then towards the sides, so as to pull more of the "umbrella" into the naso-pharynx. The thermometer case is now withdrawn. We have now a sac lying in the nares, its closed end protruding well into the pharynx behind, and its open end protruding at the anterior opening of the nares. If it be thought necessary, and is convenient, the inside of the sac may be brushed with some household astringents, such as alum solution, turpentine, etc. A considerable quantity of cotton-wool is now, by means of the thermometer case, pushed well back to the bottom of the sac. Then the thermometer case being held firmly against the packed wool, the mouth of the sac is pulled upon, and thus its bottom with the wool packed in it is pulled forward, and forms a firm, hard plug wedged into the posterior nares. We may now pack the sac full of cotton-wool, dry or soaked in some astringent solution. The mouth of the sac may now be closed by tying it just outside the nostril with a piece of strong thread; it is then trimmed by scissors and the ends of the thread secured outside.

The above method is easier than any I know when both nostrils have to be plugged. It might be suggested to oil the cotton or silk in order to render its introduction easy and prevent it adhering to the mucous membrane, and to render it easy of removal; but I have never found any difficulty without the oil, as the blood renders the material wet and easy of introduction, while the oil does not facilitate removal, and may modify the effect of the astringents that may be used. The

plug may remain *in situ* as long as any other nose plug. In removing the plug, open the mouth of the sac, and with small dressing forceps remove the cotton-wool bit by bit; if there is bleeding simply syringe the sac with weak carbolic lotion or Condy's fluid and repack with clean cotton-wool, or wool impregnated with some antiseptic. If there is no bleeding when the wool is picked out, gently pull out the sac; or if it be adhering to the mucous membrane, syringe in a little warm water, and it may then easily be removed. This method has many advantages. (*a*) It is easy, quickly accomplished, and effectual, and the materials are to be found in every house, and, indeed, about everybody's person (I have plugged in this manner, simply using a handkerchief, one part of which I used for the sac, and the other, torn into narrow strips, in place of the cotton-wool); (*b*) no damage is done to the floor of the nose or back of the soft palate by strings, etc.; (*c*) no disagreeable hawking, coughing or vomiting takes place while the plug is introduced; (*d*) there are no disagreeable strings left hanging down the the throat, causing coughing or sickness while the plug is in; (*e*) the plug can be removed gently without any force, so that no damage is done to the mucous membrane and no return of hæmorrhage caused. I employed this method frequently when in country practice, and do so now in bleeding after operation on the nares. and have always found it to be satisfactory. As the method has been of great use to me, and as I am not aware that any one has spoken of it before, I take this opportunity of mentioning it, in the hope that it may be of use to some brother practitioner when confronted by an urgent case of epistaxis, and other means of plugging are not at hand.

Belfast.

THYROIDECTOMY IN EXOPHTHALMIC GOITRE.

Caird (*Edinburgh Medical Journal*, September, 1891), has reported the case of a man, twenty-five years old, with a large cystic goitre, palpitation, dyspnœa, dysphagia, protrusion of the eyeballs, and increased frequency of pulse, in which, a year after excision of the large cyst and the light lobe of the thyroid gland, the patient felt perfectly well, the eye no longer protruded, the pulse was less frequent than formerly, and there was no discomfort or dyspnœa.

CHANCHROIDS.

℞ Ferri et potass, ta t.....drams 2.
Aq dest.....ounces 4.
M. Sig. Apply as wash.

OBSTETRICS.

PUERPERAL TETANUS.

The indications in the treatment of puerperal tetanus are threefold: (1) Local treatment for the elimination and destruction of pathogenic agents. (2) Modification of the blood which is affected by the toxine. (3) Diminution of the excito-motor power of the nervous centres. We cannot hope much from local antiseptic treatment after the appearance of the first symptoms, but this malady is unusually severe when complicated by septicemia, and in combating the latter we may perhaps diminish the intensity of the principal affection. The greatest caution is necessary in order to avoid violent dilatation of the cervix, which might induce reflex action, and thus increase the muscular spasm. Attempts hitherto made to modify the condition of the blood have been without result, but it is known that immunity from tetanus may be secured in rabbits by injecting into the blood tetanic cultures filtered and raised to a temperature of 60° C., according to Vallard's method, or by introducing terchloride of iodine under the skin, after the example of Behring and Kitasato; and it is claimed by these last observers that tetanus may be cured by the injection of blood serum obtained from animals rendered insusceptible to this disease. The single attempt made to verify this theory by Baginsky resulted unfavorably, and further experiments are rendered difficult by the large quantity of blood serum required. Opium and morphine, belladonna and atropine, chloral and chloroform, bromide of potassium, curara, nitrite of amyl, tobacco, veratrum viride, etc., have all been used in the hope of diminishing contraction and lessening the excito-motor power of the nervous centres. The rare cures reported have been achieved by varied medication, leeches, musk, valerian, warm baths, injections of turpentine, and chloral, but chloroform by inhalation has seemed most frequently beneficial, though the greatest care and skill are necessary in its administration, as the danger of asphyxia in tetanus is constant, and may be increased by chloroform itself. The inhalations must be continued for several hours in order to produce profound and prolonged narcosis. Chloral is next to chloroform in value, and one grain every hour, 10, 12, 14 grains a day may be given by the mouth if possible, or, if the trismus be too great, it may be given in 4-grain doses by enema. If the injections are not retained we may have recourse to morphine, which acts promptly, lessens pain, and induces sleep.

Prolonged warm baths, followed by wet compresses, have a sedative action, and favor elimination of the poison by the skin; but their use must be regulated by the condition of the patient, and they must be instantly given up if they seem to increase contraction. The hygienic surroundings of the patient must be carefully watched, and she must be preserved from physical and mental agitation. The body must be kept at a mild and uniform temperature, and intestinal accumulations removed by enema, though all efforts to rise must be strictly forbidden. Thirst should be assuaged, and the diet made as nourishing as possible, without attempting to open the jaws by force. Prolonged confinement to bed is advisable during convalescence, in order to avoid relapse.—*Gazette des Hôpitaux*, December 3, 1891.

PREVENTION OF MAMMARY ABSCESS.

Tarnier (*Jour. des Sages-Femmes*, December 16th, 1891), insists upon women being kept very clean in childbed. Their hands must be washed, else the nipple may be contaminated by a finger that has just touched the vulva. The nipple should be washed both before and after every act of suckling with water that has been boiled, or with a solution of boric acid. The washing must be done with clean lint or sterilized wool, and not with a sponge. The preliminary washing is necessary, as there might be microbes on the nipple, and the child's mouth might transfer them to a minute fissure, frequent on the nipple after delivery. The second washing removes from the nipple, all milk which, if left there, might become a breeding-ground for germs, and thus set up abscess, or infect the child's mouth and cause aphthæ. Professor Tarnier takes a stronger precaution in his wards. Every woman has her breasts dressed, as a preventive measure, with a compress soaked in a 1 in 5,000 sublimate solution, held in place by strapping, as the pad is likely to slip; a band of gauze is passed round the thorax and wound around the breasts, so as to envelop them completely. There were, in consequence, only two cases of abscess of the breast from November 1st, 1889, to July 15th, 1890, and in both the mammæ were, for different reasons, neglected. This application of sublimate cannot possibly hurt the fœtus. A syphilitic infant can safely take five minims of Van Swieten's solution. The equivalent of that dose in a 1 in 5,000 sublimate solution would be 25 drops, and a child suckling a breast dressed as above described could hardly swallow a trace of the mercury.—*Brit. Med. Jour.*

GYNÆCOLOGY.

GALVANISM IN PRURITUS VULVÆ.

S. S. Kholmogoroff (*Med. Obozrenië*, No. 13, 1891) has tried galvanism in an extremely severe and obstinate case of pruritis with very satisfactory results. The patient, a generally healthy and well-nourished, regularly-menstruating lady, aged 36, married twelve years, had begun to suffer from the complaint, without any assignable cause, two years previously. For the first six months or so the symptoms had appeared only a few days before each menstruation, increasing during the period, and ceasing altogether during the intercatamenial time. Later on it had become incessant, notwithstanding persevering treatment. Nothing abnormal could be seen about the internal or external genitals. The positive electrode—in the shape of a metallic cylinder insulated up to its distal tip by hard rubber—was introduced into the vagina for four or five centimetres, while the cathode— four centimetres in diameter, covered with chamois leather, and moistened with a salt solution—was placed upon the external genitals, and gradually moved over the whole of the itching area. The strength of the current varied from ten to sixteen milliampères, the duration of the sittings from ten to fifteen minutes. After six sittings the disease was completely and permanently cured.—*Brit. Med. Jour.*

AMENORRHŒA OF SCHOOL-GIRLS.

Dr. T. A. Reamy (*Cincinnati Lancet Clinic*), in discussing the amenorrhœa in anæmia, common to school-girls, says: (1) She must leave school, and must not even study at home. (2) She must spend several hours each day in the open air, either walking or riding. In winter she must of course be warmly clad, but must wear no sheepskins or other chest protecting pads. Standing in the open air, she must be induced to breathe deeply with the mouth closed; this should be done for at least fifteen or twenty minutes, and be repeated at least twice a day. Nothing that can be done will more rapidly improve the character of her blood. (3) She must sponge her extremities and body each morning on arising from bed. The water must be of the temperature of the room, and she must practise friction freely with an ordinary towel. (4) She must drink plenty of milk and eat plenty of beefsteak. (5) She must take small doses of iron, combined with some bitter tonic, three times a day. Improvement may be somewhat slow, but if

this course is faithfully carried out, a perfect cure will result, and her education may then be finished. If this course or its equivalent be not followed, the cases will go from bad to worse, and finally die from pulmonary tuberculosis.

DIFFICULTY OF LITHOTRITY IN WOMEN.

Guyon (*Ann de Gynéc.*, Oct., 1891) observes that lithotrity is far harder in women than in men. The introduction of the lithotrite is easy, but the female bladder is either too readily distended or much contracted through pain. In women there is no pouch in the lower and posterior part of the bladder as in man, so that a stone may lie in any part of the vesical cavity. In woman a pouch must be made by pressing the angle of the lithotrite downwards, so that the calculus slips down and may readily be seized and crushed. This manœuvre is easy when the bladder is healthy. When cystitis exists it is very difficult and the calculus must first be seized, then brought into the lower part of the bladder and crushed. In some cases, the stone keeps persistently in the uppermost part of the bladder and has to be crushed there. This condition seems associated with a tendency in the walls of the bladder to fall in and close like the leaves of a portfolio. The results of lithotrity are much the same in both sexes. Guyon has repeatedly seen recovery within a few days, without fever, in women after lithotrity.—*Brit. Med. Jour.*

PROLAPSE OF THE FEMALE URETHRA.

Kleinwächter says (*Zeitschrift für Geburt. und Gynäkol.*, Band. xxii., Hft. 1, 1891) the affection has always been considered a rare one, but the author, after observing two cases, investigated the literature of the subject and was able to collect about one hundred cases. This would go to show that the affection is not so very rare, but that no particular attention has been paid to it; and this is in great part due to the fact that most of the cases occur in children. The prolapse may be as large as a bean, a walnut, or even a pigeon's egg; in fact, Lawson Tait and Baehr observed cases as large as a hen's egg. The prolapsed tissue is hyperæmic, œdematous; pale-red, dark-red, or bluish-red in color; is eroded, suppurating; slightly or very painful, whether coming on suddenly or gradually, etc. The prolapse is seldom a partial one, but is usually complete. Of thirty-four cases it was complete in twenty-four and partial in ten.

PÆDIATRICS

INTUBATION IN RUSSIA.

Jakubowski's results are as follows:

1. Primary diphtheria of the larynx. In fifty-nine cases, intubation was performed in thirty-two, with twenty-one recoveries—65.6 per cent.

Tracheotomy was performed in twenty-seven cases, with two recoveries—7.4 per cent.

In five cases of secondary diphtheria, where intubation was performed, there resulted three recoveries—60 per cent.

From these results the author draws the following conclusions:

Intubation is an operation less dangerous and less difficult than tracheotomy.

2. The inconveniences of intubation are: (*a*) the patient should be under the constant charge of the physician, and (*b*) the introduction and removal of the tube provokes disagreeable symptoms.

3. Secondary pneumonias follow more often intubation than tracheotomy.

4. In croup limited to the larynx and to the superior part of the trachea intubation is the procedure necessary.

5. In a diffuse croupous inflammation of the larynx, trachea, and bronchial tubes, tracheotomy is the operation required.—*Bull. Gen. de Thèrapeutique*, December 15, 1891.

GASTRO-INTESTINAL HÆMORRHAGE IN THE NEW-BORN.

Two cases of this character are reported (*Rev. Mens. des Mal. de l'Enf.*, October, 1891), and there is also a study of certain accidental hæmorrhage with local causation. They occur in children who are usually normal in appearance, they have little or no tendency to recurrence, and may be followed by complete cure. The quantity of blood lost varies; there may be only a single discharge, or there may be several, the quantity lost being sufficient to cause death from acute anæmia, or from the weakness which follows the accident. Hæmatemesis alone rarely occurs. There is most frequently a discharge by the mouth and rectum, or by the rectum alone. In one of the author's cases, intestinal hæmorrhage occurred the day after birth, and in the other, hæmatemesis, which was followed on the next day by a large intestinal hæmorrhage. Both children recovered. These cases followed the rule that such hæmorrhages usually occur within thirty-six hours from birth. Such bleedings are probably due to new conditions of the

circulation in the walls of the stomach and intestine, the circulation being more active than during fœtal life. For treatment the author recommends a warm bath at 38° C. This was efficient in his case in which the hæmorrhage recurred.

COMPLICATIONS OF CHICKEN-POX.

Demme (*Wein med. Blätter*, Nos. 3 and 4, 1892), discusses the complications of varicella observed by him in Berne during 1890. He relates two cases in which there were very marked prodromata; in one case there was for three days high temperature, somnolence, anorexia, nausea, and, finally, a convulsive seizure; in the other, there was severe blood-stained diarrhœa, accompanied by vomiting and fever. After these symptoms had lasted eighteen hours, a copious eruption of varicella appeared, and the symptoms disappeared so quickly that in two hours and a half the temperature was normal, and in twelve hours more the child was practically convalescent. He met with two cases in which the eruptive period was unusually prolonged; in both the successive crops of pocks which appeared at intervals of three or four days were accompanied by a scarlatiniform erythema, and in both nephritis occurred as sequela. He met with two cases in which the rash became gangrenous: one, a boy, aged 2¾ years, died; the other, also a boy, aged 2 years and 2 months, recovered. The treatment in the successful case consisted of careful feeding and the application of tincture of iodine to the gangrenous spots, previously cleaned with the following modification of Lugol's solution: pure iodine 1 part, iodide of potassium 10 parts, distilled water 500 parts; finally, the part was packed with iodoform gauze. The bacteriological examination of these cases did not yield trustworthy results, and nothing was observed in either case to throw any light on the cause of the occurrence of gangrene. Demme also met with two examples of ulceration of the varicellar pocks, an event which he considers to be rare. In one case there seemed to be little room to doubt that the ulcerative process was tuberculous, the infection having taken place through the mother, who was in an advanced stage of pulmonary phthisis. The treatment adopted in this case, which was successful, consisted in a daily warm bath containing about 7½ grains of corrosive sublimate, painting of the ulcers with iodoform dissolved in ether and subsequent packing with iodoform gauze, and the internal administration of syrup of the iodide of iron.—*Brit. Med. Jour.*

HYGIENE.

BACTERIOLOGICAL EXAMINATION OF WATER.

The chief interest attached to the bacteriological examination of water, writes Professor P. A. Frankland in *Nature*, lies in its application to the hygiene of water-supply, inasmuch as it is all but certain that two at least of the most fatal zymotic diseases—cholera and typhoid—can be, and are constantly propagated through the presence of specific micro-organisms in water, and indeed the majority of the bacteriologists are agreed as to the particular forms responsible for these diseases. On this account it is conceived by many that the primary object of the bacteriological examination should be the search for such pathogenic microbes. It is obvious that if the typhoid organism could be detected with unerring certainty in any water in which it was present, a search for this bacillus in the ordinary course of water examination would still have only a very subsidiary interest. Waters are surely not only to be condemned for drinking-purposes when they contain the germs of zymotic disease at the time of analysis, but in all cases when they are subject to contaminations which may at any time contain such germs. Sewage-contaminated waters must on this account be invariably proscribed, quite irrespectively of whether the sewage is, at the time that the water is submitted to examination, derived from healthy or diseased persons. In the present state of our knowledge there can be no doubt that chemical analysis affords us in general a better, although a far from perfect, indication of sewage contamination than do the results of bacteriological examination. The real value of these bacteriological investigations, if judiciously applied, consists in their power of furnishing us with information as to the probable fate of dangerous organisms, should they gain access to drinking-water. It is by their means that we have learnt that many such organisms can preserve their vitality—nay, in some cases can actually undergo multiplication—in ordinary drinking-water; that they are destroyed by maintaining the water at the boiling point for a short time; and that they are more or less perfectly removed by some processes of filtration and precipitation, whilst other processes of the same nature are worthless, or even worse.

Strychnine is used as an antidote for snake bite in Australia.

HYOSCYAMINE IN LETTUCE.

Although preparations of lettuce have from very early times had a reputation in medicine for their soporific properties, the narcotic constituent of the plant has never been ascertained with any certainty. Various neutral, fatty, and waxy bodies separated from the milky sap of different species of Lactuca have been from time to time described as compounds of medicinal value, but on the other hand it has been denied that the dried milk-sap, lactucarium, in spite of its narcotic odor, possesses any sedative action, and in fact this preparation is no longer officinal in England or the United States. It is therefore interesting to learn in a communication from the Research Laboratory of the Pharmaceutical Society, read last week before the Clinical Society, that Mr. T. S. Dymond has established beyond doubt the presence of hyoscyamine, the principal alkaloid of belladonna and henbane, not only in the cabbage and Cos varieties of the common lettuce, L. sativa, but also in the wild lettuce, L. virosa. The amount in the young plants is certainly very minute, but in the official green extract, which according to the directions of the *Britsh Pharmacopœia* is to be prepared from the flowering herb of L. virosa, the mydriatic alkaloid occurs to the extent of 0.02 per cent. As the physiological action of the drug closely corresponds with that of hyoscyamine, there is little doubt that the sedative properties of the lettuce are due to this alkaloid; and though the quantity present in the plant during the early stages of its growth is not sufficient to restrict its consumption as a salad, the observation suggests some explanation of the serious and even fatal results recorded in cases of immoderate consumption of lettuce. It is also interesting to find an alkaloid, which has previously only been associated with the natural order Solanaceæ, as a constant constituent of a member of the Composite group, in which alkaloids have been comparatively rarely observed.—*Brit. Med. Jour.*

DIET IN FEVER.

The question of diet in fever is a most important one, and demands careful attention at the hands of the practitioner. The various metabolic changes associated with a high or raised bodily temperature, and the physiological effects which result therefrom naturally indicate that proper or improper dieting during the febrile state may be all powerful for good or emphatically harmful. A French contemporary, in discussion a new work by Mauquat, draws attention to some practical facts in connection with this subject, to which some reference may here be made. It is generally admitted that in the febrile state gastric digestion is at a low ebb, owing to the diminished secretion of gastric juice; moreover, there is a sensible deduction in one of its constituents, namely, hydrochloric acid. It is for this reasons that patients suffering from fever find acid drinks so grateful to their palates. The proportion of pepsin is not reduced, but both the pancreatic and biliary secretions are much diminished, rendering the digestion of fatty matters almost impossible. It is pointed out that eggs are very unsuitable for food in the febrile state, their digestion requiring a large amount of hydrochloric acid, which is always deficient in these cases. Meat, of course, falls into the same category. With regard to milk, its chief utility seems to be in the water and salts which it contains. If a little hydrochloric acid be added to it, its digestion would be almost assured. Farinaceous materials are well digested by fever patient, and for this reason may be administered in suitable cases. Beef tea as ordinarily made does not contain much albumen, but it is rich in salts, and is useful on these grounds. To generalize, however, beyond a certain point in regard to diet in fever would fail to be practically serviceable; each case, therefore, of fever must be treated, from a dietetic point of view, on its own merits, and the practitioner would do well to bear in mind that he has to steer a middle course course between overfeeding and under-feeding. A too low diet is obviously disadvantageous to the patient, while the other extreme is just as harmful.—*Med. Press.*

EYE LOTIONS OF BORIC ACID FOR INFLUENZA.

Dr. Richard Sisley, in a paper read before the International Congress of Hygiene and Demography in London last summer, quoted Dr. Bezly Thorne, who recommended that the eyes of people exposed to infection should be bathed with a solution of boric acid, and found that none of those who adopted that practice suffered from the disease. The recommendation was founded on the theory that the poison of influenza is absorbed by the conjunctiva.

FOR INCONTINENCE OF URINE.

℞ Tinct. nucis vomicæ.....f ʒ vj.
Ext. damianæ fl.....f ʒ ijss.
Glycerini.....q. s. ad f ʒ iv.
M. Sig. ʒ j three times a day, after meals, in a wineglassful of water.

MEDICAL CHEMISTRY.

EFFECT OF HEAT ON CHLORALAMIDE.

It is a common practice in making aqueous solutions of chloralamide to hasten the process by the aid of heat. It is pointed out (*Therap. Monatsh.*) that this drug decomposes when its temperature is raised to over 60° C. Hence the solution should always be prepared in the cold way.

ARSENICAL COD-LIVER OIL.

Arsenical cod-liver oil, upon the request of a specialist in children's diseases, was prepared as follows: 0.5 gm. arsenious oxide was warmed with 20 grams absolute alcohol in a small flask; no solution took place until a small particle of potassium carbonate was added, when the oxide immediately dissolved without dissolving the potassium carbonate; after filtering, the solution was added to 1,500 grams cod-liver oil, and warmed on a water-bath until the alcohol was dissipated. The oil is perfectly transparent, and holds arsenious oxide in solution; 30 grams of the preparation contain 5 mg. arsenious oxide [this is not correct if the arsenious oxide be completely dissolved; 30 grams will then contain 10 mg.—F. X. M.] and can be given to children in doses of ½—1 teaspoonful.—A. Janssen, *Pharm. Ztg.*, 1891, 780.

SOLUTOL AND SOLVEOL, TWO NEW DISINFECTANTS.

The firm of "Dr. F. von Heyden Nachfolger" in Radebeul, near Dresden, the original manufacturers of salicylic acid under Kolbe's now expired patent, have put on the market a soluble form of cresol under the name *solutol*. The solubility of cresol is brought about by the pressure of cresol-sodium. The preparation contains, in 100 cc., 60.4 gr. of cresol, one-fourth of it in a free state, and the remainder as cresol-sodium.

Solutol has been found to be a most efficient disinfectant for general domestic or hospital purposes, such as sinks and water-closets, infected clothing, sputa of consumptives, etc., and an excellent preservative of dead bodies.

It is suitable for medical or surgical disinfection, owing to its strongly alkaline character.

Solveol, on the other hand, is a disinfectant and antiseptic specially designed for surgical purposes. In this the solution of cresol is brought about by the presence of sodium cresotate. The compound is soluble in water to a perfectly clear liquid, which, while much more efficient than carbolic acid, is at the same time much less poisonous.

For medical or surgical purposes the most suitable strength of solution is:

Solveol	27 cc.
Water	to make 2,000 "

For disinfecting the air in sick-rooms, by spraying, 37 cc. of solveol should be dissolved in 480 cc. of water.—After *Zeitschr. d. Oest. Ap. Ver.*, December 10th.

THE ALKALOIDAL VARIABILITY OF OPIUM.

Nearly all the published criticism regarding opium chiefly refers to the percentage of morphine, little attention being paid to the amount of narcotine present. We are, therefore, pleased to notice that M. Adrian has published (*Nouv. Remed.*) the results of thirty-eight assays made at his pharmaceutical factory during the past few years. With two exceptions all the samples showed above seven per cent. of morphine, the average being ten per cent., while the average narcotine content was 2.5 per cent. The average in the latter case gives little idea of the variation actually present, so we quote a few of the figures:

Morphine	Narcotine	Morphine	Narcotine
10.21	2.947	9.00	0.50
11.00	3.343	12.065	3.05
8.066	1.833	8.50	1.90
10.515	3.85	8.48	3.49
8.35	.52	9.203	3.906
9.208	1.555	7.51	.76
12.15	.25	6.75	2.30
11.666	2.025	3.875	3.45

The method of assay is not mentioned, but the want of that information does not detract from the value of these figures so far as comparison is concerned, and they suffice to explain how some preparations cause little or no headache, while others give intense dissatisfaction.

FATAL HÆMORRHAGE FROM SCARIFICATION OF THE CONJUNCTIVA.

Shirley (*New York Medical Journal*, 1892, lv, 1, p. 15) has recorded the case of a mulatto infant, six weeks old, with hereditary syphilis, in which fatal hæmorrhage followed scarification of the palpebral conjunctiva for purulent conjunctivitis. Hot water, ice, and styptics failing to restrain the hæmorrhage, sutures were passed beneath the bleeding surfaces and the upper and lower lids were united. The hæmorrhage was controlled, but the child died.

NEWS AND MISCELLANY.

CHIROGRAPHY AND MERIT.

It is related of the late Sir Richard Quain, whose handwriting was execrable, that when a student he once went up for an examination, in which he confidently expected to take the prize. However, the medal was given to somebody else, and on inquiry it was found that his writing was so bad that the examiner had been able to read only one of the answers.

MORPHINOMANIACS AND HYPODERMIC SYRINGES.

Owing to the recent publication of a case of death after injection of a small amount of cocaine into the tunica vaginalis, there have been numerous articles in the French medical papers on the entire question of injections of powerful solutions. M. Verneuil has shown that the much-vaunted hypodermic injections of antipyrin have proved of more harm than good; They often fail to cure neuralgia, lumbago, etc., and always cause pain, not infrequently complicated with wide ecchymoses, œdema, lymphangitis, and neuritis. These dangers may be avoided if only weak solutions and clean syringes be used, but there is no doubt that there can be but one opinion on the use of unprescribed hypodermic injections by the general public. Last summer, when traveling in a railway carriage in the South of France, an English medical man heard a middle-aged lady proudly boast that she had a *névrose* which could only be assuaged by frequent hypodermic injections of morphine. She then raised her skirt so as to expose the bare skin of the thigh immediately above the stocking, and gravely injected a syringeful of morphine, giving her fellow-passengers, who listened with intense interest, a long account of the subjective symptoms that would follow. The *Gazette Hebdomadaire de Médecine* asks if legislation is not needed to forbid druggists and instrument makers from selling dangerous solutions and hypodermic syringes direct to persons who employ morphine, etc., without medical advice.—*Brit. Med. Jour.*

INTERNATIONAL PERIODICAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

The Belgian Society of Gynæcology and Obstetrics, under the patronage of the Belgian Government, has taken the initiative in organizing "The International Periodical Congress of Gynæcology and Obstetrics," the first session of which will be held in Brussels, September 14 to 19 inclusive, 1892. Three leading questions will be offered for discussion:

1st. Pelvic Suppurations; Referee, Dr. Paul Segond, Paris.

2d. Extra Uterine Pregnancy; Referee, Dr. A Martin, Berlin.

3d. Placenta Prævia; Referee, Dr. Berry Hart, Edinburg.

Fees: Members participating in the first session, 30 francs. (This will entitle the holder to a copy of the proceedings of the Congress.)

Founders (Life Membership), 300 francs.

In the connection with the Congress there will be an International Exposition of instruments and appliances, pertaining to Gynæcology and Obstetrics.

All communications pertaining to this Congress should be mailed direct to the American Secretary, who will promptly furnish all information. All notifications to be forwarded should be received by August 1st.

Everything points to a great success in this Congress. Though notices concerning it have been rather late in this country, already men of celebrity have promised to visit and contribute papers. Among the many foreigners who have written to the Secretary General endorsing and promising support to the undertaking, may be mentioned the following eminent men:

Belgium.—De Roubaix, Sacre, Mirriar, Pigeolot, Charles, Sanpart, and others.

Italy.—Porro, La Torre, Mangiazalli, Bozzi, Morisain.

Turkey.—Chatazian.

France.—Pean, Demous, Fochier, Auvard, Doleris, Pozzi, Tarnier, Budin, Terrillon, Terrier, and others.

Holland.—Stokvis, Treub, Nyhoff.

England.—Lawson Tait, Wm. Priestly, Champneys, F. Elder, J. White, Watt Black, Thornton, Doran, Specer Wells, Bantock, and others.

Austria.—Pawlik, Albert, Chrobuk.

Germany.—Martin, Leopold, Sanger, Gusserow, Veit, Winckel, Hegar, Kaltenbach, Freund, Heyder, and others.

Finland.—Engstrom, Heinricius, Pippingohold.

Switzerland.—Reverdin, Vuillet.

Russia.—Slaviansky.

Sweden.—Saliss, Westernark,

Norway.—Statfeldt, Howitz, Meyer.

Further details will be furnished as soon as received.

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THE
MEDICAL AND SURGICAL REPORTER.

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CLINICAL LECTURE.

CARDIAC GRIPPE.*

By H. HUCHARD. M. D.,
OF PARIS, FRANCE.

Gentlemen: At this time the grippe constitutes a current topic of study. The malady attacks everybody indiscriminately, but not in the same manner. As far back as 1691, Wepfer said of this affection that it was a true Proteus, because of its assuming in its manifestations all manner of interesting forms. Of these we shall to-day examine only the cardiac and vascular phenomena.

Epidemics of the grippe do not belong to recent times, for we know that during the years of 1239 and 1311 the disease exercised a deleterious influence over Europe. It was, however, during the epidemic of 1580 that it spread over Europe its disastrous ravages. G. Henish, of Saxe, spoke then, for the first time, of this disorder as attacking the præcordial region, producing palpitations and a small, irregular and accelerated pulse. Still later, in 1709, there were found at autopsies polypoid concretions of the great venous trunks of the heart. It was noticed also, in 1729, by various authors, that the disease produced syncope and præcordial distress. Beccaria, of Bologna, in 1730 asserted in a most categorical manner, that in this affection "pain existed over the region of the heart, the pulse being, at first, compressible and uneven, and afterwards, in the progress of the malady, it became large, full, hard, and frequent or hard and uneven." A great number of sudden deaths were reported at Edinburgh in 1732, and by Saillant in 1775. During the epidemic of Silesia, in 1736, intense pains of a lancinating character were observed to occur over the præcordial region. In 1743 Ludwig Huckel observed lipothymies and a small and accelerated pulse. Finally, in 1800, Gilibert called attention to a rapid, weak pulse, almost filiform, accompanied with more or less prolonged distress over the region of the heart.

You see, therefore, that the cardiac troubles produced by the grippe have been known for a long time back; but not all the symptoms of this nature were previously observed, either because the classification of such symptoms was a defective one or because the disease did not remain long enough for the heart and the vessels to become affected during its course or after the establishment of a cure. This lecture, in which I will try to record my personal observations and those of other authors, will be devoted to the discussion of the subject from the interesting point of view referred to. I will endeavor to show you that during an attack of influenza the heart and the blood-vessels may become equally affected. We have, therefore, to study *cardiac* and *vascular grippe.*

1. *Cardiac Grippe.*—Any of the constituent parts of the heart may be affected: the pericardium, the endocardium, the myocardium, and, finally, the nervous mechanism itself.

a. Grippal Pericarditis.—We made, the day before yesterday, an autopsy on a very interesting patient. After presenting during life the symptoms of a grippal pneumonia followed by those of a meta-pneumonic purulent pleurisy, our attention was called to the heart, owing to the manifest signs of pericarditis, probably of a secondary nature, and due to the propagation of the pleuro-pulmonary inflammation. Albumen was abundantly found in the urine; the tongue was dry; the adynamic condition quite marked; and the patient died at the time when the question of empyema was being discussed. The *post-mortem* confirmed our diagnosis; it revealed an abundant purulent pleural effusion on the left side, accompanied with atelectasis of the lung; a dry pericardium with numerous adhesions, and a myocarditis which will be confirmed, undoubtedly, by microscopical examination.

*A clinical lecture delivered at the "Hôpital Bichat."

Here we have, therefore, first an attack of the grippe, followed by *pneumonia* and *pleurisy*, and, finally by *pericarditis*, undoubtedly secondary to the pleurisy. This is not always what happens in such cases, for purulent pericarditis has been observed at the very onset. Such, however, is not of frequent occurrence.

Grippal pericarditis has been noticed by other authors. Fereol (*Soc. Med. des hôpit.*, February 21, 1890) has spoken of "a distressing dyspnœa resembling that occurring in certain forms of myocarditis," and asserts to have observed four cases of pericarditis during the epidemic of 1889–1890. Menetrier, in his remarkable thesis of 1886, affirms that pericarditis is so frequent in the course of grippal pneumonia, that it may be latent, and refers to two observations of his own, to one of Bucquoy and to three others of Cornil (*Jour. des conn. méd.*, 1886), in all of which there were found, at the autopsy, abundant false fibrinous membranes on the pericardium, without a single symptom or sign having been recognized during life. On the other hand, pericarditis may be diagnosed, as in the case we have mentioned. Jaccoud has reported an instance in which there were developed phenomena of cardiac asthenia, phenomena which, according to this author, lead quite frequently to a fatal termination.

In fact, the gravity of grippal pericarditis is due to two principal causes: its frequent complication with myocarditis, and its purulent nature. In the first instance, inflammation of the pericardium is due most generally to pneumococci and is nearly always secondary to a pleuro-pneumonia. Thus Grasset (*Montpellier Médical*, 1890) has seen a case of pericarditis from which were removed 700 grammes of a dirty, greenish, thick and homogeneous liquid, accompanying a true pleural abscess. Very rarely is a pneumococcic purulent pericarditis of a primary nature, that is to say, independent of all local lesion in the lung or pleura. A pneumococcic pericarditis is, in fact, like certain forms of endocarditis, indirectly produced by the grippe, and ought to be considered as a complication of this malady. The proof of this assertion lies in the fact that other microbes, such as staphylococci and streptococci may similarly be found in the purulent liquids.

Grippal pericarditis is, nevertheless, not ordinarily of a purulent nature; you will find some cases in which the liquid is serous or hæmorrhagic, as I have observed in two instances. Most generally the pericarditis is dry, there being but little liquid of a pale yellow color, as is similarly found in cases of purulent pleurisy or in pneumonias which have terminated by gray hepatization. At all events, it is a complication which claims our attention and must be closely studied in order to recognize it.

(*b*) *Grippal endocarditis.*—In the febrile infectious diseases endocarditis may be of two kinds: on the one hand, it may be simply infectious without being contagious, infectious because it is due to the presence of bacteria; non-contagious, because it is localized in its effects and is not disseminated through the action of the micro-organisms. Then, again, it may be both infectious and contagious at the same time, causing throughout the circulation the most serious general symptoms.

Cases of the first kind have been reported, but they are rare. They occur generally in persons subject to old valvular lesions, in whom the slightest cause may produce the condition referred to. Thus a chronic endocarditis may be the cause of the acute form. Similarly, a lesion of the valvular orifice, which has been for a long time in a latent condition, may be so influenced by the grippe as to produce the most serious symptoms. In reference to this point Stokes in 1840 reported the following case:

A man of middle age, apparently healthy but far advanced in the inflammatory disease in question, was attacked by the grippe. Under its influence it was found for the first time that the heart became susceptible of the most extraordinary irritation. The violent and tumultuous action of the organ could be perceived over a large portion of the chest, and was accompanied at the same time by a murmur which occurred during the first sound. For three or four days the patient appeared well, but he died suddenly. At the autopsy, there was found calcareous deposits on the aortic orifice which so obstructed this, that it seemed at first sight as if the opening were entirely closed. There was, in fact, only a very small aperture through which only a fine probe could be introduced. This man never exhibited during life any symptoms of cardiac trouble, and it is possible, according to Stokes, that, owing to the extraordinary size of the deposits, the affection was not recognized during a more or less calm condition of the heart. Thus, in this patient the symptoms of cardiac disease were made apparent through the action of the grippal attack. The heart was disturbed in its action, which proves, on the whole, that the painful sufferings experienced in the course of a disease depend, within certain

limits, at least, more upon the vital than upon the physical condition of the organs.

Graves has reported a similar case relative to a large obstruction of the aortic orifice (complete ossification of the aortic valves and sinuses, accompanied with retraction of the opening). This patient, who had not exhibited any heart trouble, was, six months before, suddenly attacked with symptoms of distress on going up a hill. A month before death he had the grippe, and consulted Graves. At that time a murmur was detected, occurring during the first sound of the heart. He had bronchitis, and suffered from cough and attacks of asthma. These symptoms progressed rapidly; orthopnœa and dropsy were increased, and death overtook the patient in a short time. Here, according to Graves, two causes contributed to diminish the vitality of the heart and hasten a fatal issue: the efforts of the patient in climbing the hill and the invasion of influenza.

Primary, simple endocarditis may give rise, after an attack of the grippe, to permanent lesions of the orifices. This must be rare, however, judging from my personal observations and especially from the fact that authors are silent in this respect. Nevertheles, Rochoux some time ago referred to a case of a woman, 28 years of age, who, after an attack of influenza, suffered from palpitation, oppressiveness, pulmonary œdema, with signs of stenosis of the left auriculo-ventricular opening, a lesion which was verified at the autopsy. The question arises, however, whether the mitral stenosis did not exist previously, and was only aggravated by the grippal affection.

In regard to the infectio-contagious endocarditis (ulcero-vegetating endocarditis), this has been observed during the course, or in the convalescing period of the grippe, being developed not only in a previously affected endocardium but also in a healthy one. The following case is reported by Oulmont and Barbier (*Médecine Moderne*, July 9, 1891):

A woman, 34 years of age, was attacked by influenza in November, 1890, and soon after exhibited symptoms of pericarditis and of mitral and aortic endocarditis (systolic murmur at the apex and base of the heart). She died on the 6th of February. 1891, with typhoid symptoms. At the *post-mortem* there was found a slight pericarditis accompanied with small points of ecchymosis disseminated over the visceral pericardium, and a small amount of a reddish serous liquid in the pericardial sac. Surrounding the left auriculo-ventricular opening there were found small vegetations, especially over the large leaflet of the mitral valve, the small leaflet having been transformed into a cauliflower vegetation of the size of a cherry. Under a fibrinous mass a little valve was discovered, roughened and covered with vegetations, some of these being in an ulcerated condition. At the aortic orifice the valves, posteriorly and anteriorly, presented a roughened appearance, with a few irregular nodules. All these parts were in a reddened condition. The aorta was intact. Bacteriological examination revealed a streptococcic endocarditis.

Flessinger, of Oyonnax, (*Gazette Méd. de Paris*, September 2, 1891) reports the case of a child, four years of age, in which, on the 17th day of influenza, a mitral endocarditis was detected, a dull murmur occurring during the systole and diastole, being communicated as far as the axilla. The child died seven days after with pronounced cardiac symptoms, such as cyanosis, coldness of the extremities, etc. No autopsy was made.

You will also find many cases of infectious grippal endocarditis, of both a benign and malignant nature, reported in a work of Pawinski (*Berl. klin. Wochen.*, 1891, Nos. 28, 29 and 30). Finally, G. See (*Acad. de Méd.*, April 19, 1890) asserts to have observed cases of endocarditis resembling pyæmia. On *post-mortem* streptococci were found in the vegetations.

At the recent Congress of Marseilles (*Congrès de Marseille*, Sept. 21, 1891, I reported two analogous cases, and, especially, one of vegetative endocarditis due to pneumococci over the aortic orifice. This was that of a patient who had suffered for a long time previously with chronic aortitis without murmur, but in whom, after a very serious attack of grippal pneumonia, there was rapidly developed a pronounced systolic murmur with all the symptoms of an infectious endocarditis. The autopsy confirmed the diagnosis. I have seen two other similar cases, with the difference that in these instances the endocarditis affected in a sudden manner a sound heart. In these two cases the lesions invaded especially the aortic orifices.

Other cases of the same nature have been observed, and during the epidemic of 1886, Ménetier found the endocardial complication to be of a comparatively frequent occurrence, having met with it seven times at L'Hôpital de la Pitié. In these instances there was found a vegetating endocarditis of the tricuspid valve, in addition to old mitral lesions.

I must still cite the following observation: one of Lanceraux (*Soc. Anat.*, April 2, 1886) relative to a vegetating endocarditis of the

mitral and aortic orifices; one of Brourdel (Mémoire de Netter, *Arch. de Physiol.*, 1886) which was a case of aortic ulcerated endocarditis occurring in a patient suffering from old mitral lesions; and still a third reported by Hanot (*Arch. de Méd.*, 1886) which consisted of a suppurative pneumonia, accompanied with recent endocarditis of the aorta and suppurative meningitis and diplococci in the exudate. This last one, apparently of a complex character, occurred in a patient who, after the defervescence of a pneumonia of the base of the left lung, was attacked by delirium for six days, followed by right hemiplegia accompanied with endocarditis, this being characterized during life by a marked systolic murmur.

In the majority of these cases there has been found in the depth of the vegetations the same pathogenic germ, that is, the same as that causing pneumonia. The seat of the endocarditis is generally at the aortic orifice and is rarely accompanied with emboli owing to the peculiar disposition of the vegetations. Infectious pneumococcic endocarditis appears chiefly in two forms: In the first place, it may occur conjointly with pneumonia, but in this instance it is not easily recognized, since its symptomatology is shrouded, so to speak, by that of the pulmonary complication. Most generally the endocarditis follows a pneumonia, coming on the same day of, or many days after, the defervescence of the pulmonary inflammation; then the fever returns, the cardiac symptoms become more pronounced and along with these a typhoid state is established. Secondly, endocarditis may come on *pari passu* with cerebral symptoms, these being due to a grippal suppurative meningitis. Finally, in rare cases pneumococcic endocarditis may be developed primarily without any pulmonary complication.

It must not be considered, however, that an infectious endocarditis developed during the course or the convalescence of grippal pneumonia is always due to the same germ. Other micro-organisms than pneumococci have been observed. Streptococci and staphylococci have been found in the valvular vegetations. This proves, once for all, that we do not have one but many kinds of infectious endocarditis; it further shows that the grippe is the resort, so to speak, of numerous germs, and that the disease is characterized especially by the frequency of microbian associations and of secondary infectious processes. This explains why influenza is such a complex and troublesome affection. An important case is reported Jaccoud (*Acad. de Scien.*, May 24, 1886) which sustains this assertion. At the autopsy of the patient, there were found pneumococci in the hepatized lung and staphylococci in vegetations of the mitral valve; that is, there was an association of the parasite of pneumonia and of the microbes of suppurative processes.

c. Grippal Myocarditis.—This is one of the results of the infectious nature of the disease. Myocarditis may exist during an attack of influenza as during other maladies of the same nature. At the autopsy of a case the cardiac muscle exhibited a deadly pale coloration; the organ was heavy, of a soft consistency; and on carefully examining the coronary arteries there was found an obliterating endarteritis upon which depended the lesions of the myocardium.

A Russian physician, Wassilief, of Alexandre Hospital at St. Petersburg, has pointed out myocarditis as one of the complications of influenza. I have told you that it is associated with pericarditis, and, undoubtedly, with myocardiac degeneration to which were attributed the serious symptoms exhibited in the three cases reported by Letort. These symptoms were weakness of cardiac action—frequent, small, uneven, irregular and trembling pulse; painful sensations over the middle of the sternum; earthy pallor of the face; cold and cyanosed extremities; and rapid death. Acute myocarditis, however, is rarely so pronounced, and does not generally occur except through atony or cardiac collapse, or still when arhythmia, with or without tachycardia, is present. Arhythmia must always be carefully studied because it is a symptom that plays an important part in all acute or chronic myocarditis, since the rythmical action of the heart is a function of the cardiac muscle and not of the nervous mechanism of the organ. Sometimes also, the irregularity of the pulse may be manifest as a phenomenon alone of the grippal state, of which Potain has cited two examples; but this simple arhythmia, free from all other symptoms, is not sufficient by itself to constitute a diagnostic point of acute myocarditis. It is, in influenza, characterized by a weakness of the first, and afterwards the second sound; sometimes by leipothymia, syncope, embryocardia (of which I shall speak later on) and a species of a peculiar *trotting* sound. This is due to an effort of the systole to occur in two periods, and may be represented by a long period between two brief ones, while the true galloping bruit is characterized by two short periods followed by a long one, or a long one followed by two brief ones.

A *sudden* or simply *rapid* death may be observed during an attack of the grippe, following a syncope. To explain this phenomenon three hypotheses may be advanced: Is the accident the result of profound nervous alterations which we shall study later on, or the result of a myocarditis, or of a species of anginous syncope? When the first manifestation of the malady is one of syncope, and when it is accompanied (as I have seen it many times) with sudden weakness of the lower extremities, it can not be attributed either to a myocarditis, which cannot be developed so rapidly, or to a cause of anginous character.

It must be admitted that the affection, from the start, may localize itself in the medulla, which is proved by the observation of Burlureaux (*Gazette Hebdomadaire*, January 25, 1890) relative to a patient who, immediately after an attack of syncope, had epileptiform convulsions. A patient of Potain (quoted by Duflocq in the *Rev. de Méd.*, 1890) was suffering from intestinal grippe; in a short time the pulse rose to 130, after a while to 150; at times this was small, compressible and filiform; suddenly death occurred, brought on by an attack of syncope. May the action of intestinal reflexes be considered in this case? Such a thing is possible, but it is difficult of demonstration.

Another patient had an initial syncope, together with acute lumbar pains. It is probable that in this instance the nervous system was involved. Still another patient under my observation who after some time exhibited symptoms of arterio-sclerosis of the heart (dyspnœa and somewhat vague symptoms of anginous nature), was taken after an attack of influenza with a severe præcordial pain and died suddenly. It is difficult not to believe, in this case, in the existence of an anginous syncope.

Grippal angina pectoris has been likewise observed during the various epidemics of influenza. The epidemic of 1729 was especially characterized by syncope, by an intense and lancinating pain over the præcordial region. Recently, in 1856, Bertholle called attention to a sensation of constriction occurring over the sternum. A short time before, Malcrops, of Brussels, in a work upon "the grippe and its epidemics" (1884) had referred to a pain felt over the superior fourth, third or half of the sternum.

In 1889 I made some significant observations, and I then insisted upon two things especially: Firstly, that in anginous patients the sterno-cardiac attacks are of an aggravated character, these being intense and of frequent occurrence; secondly, (*Rev. gén. de Cli. et de Thér.*, January 16, 1890, and in this I was followed within three days only by Peter (*Bullet*) *Méd.*, January 19, 1890) that there exists a *grippal angina pectoris.*

Other authors have made similar observations, and thus an English physician, Mariet (*The Lancet*, March 29, 1890), has reported the case of a patient who succumbed to an anginous attack on the 18th day of the grippe. In the majority of cases, however, it may be said that in the patients suffering from chronic angina, the attacks of angina are suddenly aggravated by influenza. I hope, at my next lecture, [to appear in the next issue of the REPORTER], to show you the reason why all cardiac affections are thus aggravated, and shall consider the damage wrought by the grippal poison upon the nervous mechanism of the heart and the blood-vessels.—*Le Bulletin Médical*, February 3, 1892.

COMMUNICATIONS.

A SUCCESSFUL CASE OF LATERAL ANASTOMOSIS OF THE ILEUM FOR MALIGNANT STRICTURE, WITH A DISCUSSION OF THE OPERATIVE TECHNIQUE.*

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I saw the patient, Mrs. E. C., for the first time on November 28, 1891, in consultation with her physician, Dr. Thomas Curry, of this city. She gave the following history: Twenty-eight years of age, and married nine years. She had had five children at term and two miscarriages. Three years ago, when five months pregnant, she fell from the window of the second story of her house, striking with her back and occiput upon the pavement below. This accident resulted in a slight uterine hæmorrhage, but the pregnancy was not interrupted, and she went to full term. Shortly afterward however, she began to suffer from epileptic attacks. These continued up to eighteen months ago, since which time she has been entirely free from them. On August 20, 1891, she was delivered of a hydrocephalic child. The labor was natural, and was not followed by any puerperal complications. At this time she was in excellent health, and weighed 185 pounds. Shortly after getting up, however, her health began

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to rapidly fail. She began to have frequent attacks of violent abdominal and pelvic pain, preceded by the movement of gas in the intestines. Her abdomen was always greatly distended, which added to her discomfort. There was obstinate constipation, and the bowel movements could only be induced by purgatives and rectal injections. These movements were always small in amount, and caused a great increase in the abdominal pain and tenderness. She had constant nausea and vomiting, and the abdominal distension was increased after taking food. She continued to lose weight and strength, and suffered from night-sweats. Seven weeks after her confinement her menstruation appeared, but it has not recurred since. Her weight at the time I first saw her had been reduced to 115 pounds.

On examination, I found the abdomen distended below the umbilicus. It had the appearance of a tumor, filling up the lower part of the abdominal cavity. The abdomen above the umbilicus, although distended, was not greatly so. Percussion gave a tympanitic note over the entire abdomen. No tumor could be felt on palpation. Indigation gave negative results. As I was unable to demonstrate by my examination the existence of a new growth, I looked upon the cause of the chronic obstruction as being due to intestinal adhesions, the results of a localized peritonitis. Cœliotomy was, therefore, urged, and consented to by the patient.

Operation. Cœliotomy was performed at the Polyclinic Hospital on November 30, 1891, Dr. J. H. Gibbon, senior resident of the hospital, and Mr. Louis J. Borsch assisting in the operation.

Upon opening the abdomen, which was done in the median line below the umbilicus, the omentum was found adherent to and blocking up the entrance to the pelvic cavity. After freeing these adhesions, the pelvis was examined, and its organs found in a normal condition. The small intestines were greatly distended and adherent to each other at several points. These were then carefully separated. Up to this stage of the operation the conditions found seemed to confirm the diagnosis of an old peritonitis, resulting in intestinal adhesion. The existence, however, of the distension indicated a stricture at some point in the bowel, due either to additional adhesions or a new growth. With this view of the case in mind, the examination was carried still further, and resulted in finding a large cancerous mass situated in the ileum and involving the mesenteric glands. At this point the stenosis of the gut was so marked that it was with difficulty the gas could be pushed through it. As the involvement was extensive, any attempt at resection would have dangerously prolonged the operation without giving the patient the slightest chance of permanent relief. It was therefore decided to perform a simple lateral anastomosis without resection. Ten inches of the ileum on each side of the stricture were stripped of their contents, and a ligature of soft rubber tubing passed through the mesentery, and tied around the gut at each end to prevent the regurgitation of the intestinal fluids. The field of operation was then protected by packing carefully with gauze pads. Two openings into the intestine were then made, one upon each side of the stricture, and both about three inches distant. The excluded portion of the gut was then thoroughly irrigated through these openings. In making the anastomotic communication I used the solid rubber rings, and, to add further to the security of the parts, "the right-angle continuous suture" was carried entirely around the anastomosis. No irrigation of the abdominal cavity was employed, and the abdomen was closed without drainage. The entire operation lasted twenty-five minutes, and the patient was placed in bed with a good pulse and normal temperature.

After-history. The patient made an uninterrupted recovery, and was discharged from the hospital in twenty-eight days. The temperature was normal throughout her convalescence, except on the day following operation, when it reached 100.4° F.; the pulse on the same day was 100 per minute—the highest number of beats during her stay at the hospital. A hypodermatic injection of morphine and atropine was given immediately after the operation, and repeated on the second and third day as the patient was somewhat restless. The patient for the first three days was nourished with nutrient enemas, and then food was given by the stomach. The bowels were freely moved on the fourth day, following the administration of calomel. There was no tendency to constipation at any time. The rings were passed on the eighteenth day. They were discharged whole, their segments not having become separated.

Immediately after operation the abdominal pain and distension entirely disappeared and remained absent throughout her stay at the hospital. The patient vomited only once, and then on the twelfth day following the administration of salts. At the time of her discharge she had gained decidedly in weight and strength, and was free from all her previous symptoms.

The patient was seen by Dr. Curry on the 24th of last February, three months after the operation. She had improved steadily in health; her bowels had moved naturally every day; there had been no vomiting, and the abdominal pain and distension had not returned. She had gained thirty-five pounds in weight since the operation, On the 10th of February her menses returned, after an absence of four months.

I shall pass at once to the discussion of some points of importance in the technique of lateral anastomosis.

The rings employed. Those used in this operation were made of solid rubber cording, and were devised by Dr. Baldy and myself, and employed by us in our experiments upon dogs. The advantages of these rings have been fully discussed in our paper upon "Experimental Studies in Intestinal Surgery,"* and I shall not refer to them here. Recently I have modified these approximation rings, doing away, I believe, with the only real objection that could be advanced against them, namely, that they allowed too small an opening between the intestines. As I now make them they are oval in shape instead of being round, as they were originally. This is accomplished by means of a strand of catgut fastened across the ring at each end. They have six ligatures attached in place of four; and the segments of which the ring is composed, as well as the threads, are held by means of catgut. With a ring of this kind an anastomotic opening may be made in the intestine, oval in shape, and having the following dimensions: 1¾ inches long, ½ of an inch wide at the centre, and ¼ of an inch at either end.

Additional sutures about the anastomosis. It is now generally held by operators that additional sutures about the seat of operation give greater security to the parts and lessen materially the dangers of leaking. For this purpose I employ the "right-angle continuous suture" of Cushing, using a simple knot for its beginning and ending, as advised by Keen, instead of the original complicated method. This suture may be introduced with great rapidity, and holds the serous surfaces together with accuracy. It is good practice to carry this suture completely around the anastomosis in order to be sure that there will be no leaking at any point.

Cleanliness during the operation. It is impossible to do an ideal aseptic operation where the intestines have been opened. If, however, the parts be kept carefully cleaned there will be practically but little danger of septic infection following. Those of us who do abdominal work must have frequently observed how quickly a blood-clot or other foreign material becomes adherent to the serous surfaces of the intestines, and with what comparative difficulty it is removed. No amount of subsequent irrigation will suffice to detach some of these adherent particles, and it is necessary to pick them off with the fingers. How easily, under these circumstances, a small particle of septic material may be overlooked and become the centre of an infection can be readily understood. To prevent the danger of this source of infection the seat of operation should be frequently douched during the operation with warm sterilized water. This I believe to be a most important point in the technique of these cases. It certainly can do no harm, and it not only keeps the parts clean, but it at the same time lessens the dangers of shock by keeping the intestines warm.

Rapidity in operating. In no field of surgery is time as important a factor for success as in abdominal operations. A surgeon may have the most profound knowledge of the subject, he may deal with all the accidents and complications which may arise with rare judgment and decision, and yet his results will be bad unless his operations are rapidly performed. Good results in abdominal surgery mean rapid work—that is, no shock, no ether-saturation. Park†, in discussing those sources of septic infection not concerned in the wound itself, throws out a most valuable hint bearing upon this subject. He says: "There is good reason to think that chloroform and ether administered for some time may produce such changes in the blood and tissues that vital processes of repair, cell-resistance and chemotaxis may be so far interfered with as to facilitate subsequent infection."

Feeding after operation. The tendency of most surgeons to delay giving food by the mouth, and their reliance upon rectal feeding are, I am convinced, mistakes in the early after-treatment of cases of anastomosis. If we employ in our operations rings which closely approximate the surfaces of the viscera and use additional sutures around the seat of anastomosis there can be no reason to doubt the security of the parts. It seems improbable, under these conditions, that the natural peristaltic action of the intestines

*Proceedings of the County Med. Soc. (Phila.), vol. xii., 1891.

† "Wound infection," etc., *American Journal of the Med. Sciences*, Nov., 1891.

would be sufficient to cause leakage. To throw light upon the question of early feeding after intestinal anastomosis I shall refer to the following cases of gastro-enterostomy. Brookhouse and Taylor ‡ report seven cases, with three recoveries and four deaths. In the cases which recovered, feeding by the mouth was begun on the second day. They considered early feeding as a most important factor in their successful cases. Page|| reported a series of thirty-six cases with fifteen deaths, which were in most instances due to exhaustion. Beaston* reports two cases of very great interest as bearing upon the necessity for early feeding by the mouth. The first case did well immediately after the operation, but died on the fourth day from asthenia; food and stimulants were not given by the mouth until a few hours before death. The second case was extremely weak and exhausted at the time of operation, but, nevertheless, made a good recovery. This patient was given thirty drops of brandy every hour by the mouth as soon as he came out of ether, and next morning feeding by the stomach was begun. In his remarks upon these cases he says: "Do not place too much reliance upon rectal feeding. Food in small quantities should be given early by the mouth, for in this way only can the tendency of death from asthenia be successfully combated." Jessett,† in speaking of the report of seven cases with two deaths, one of which was on the sixth day and the other on the seventh, both being due to exhaustion, says: "Both would have recovered if fed earlier."

There can be no doubt that exhaustion is the cause of death in a large number of these cases as well as in anastomotic operations in other portions of the intestinal tract, and it is impossible, with rectal feeding alone, to prevent the fatal issue. In those cases which are seen early by the surgeon and are not exhausted the question of early feeding by the mouth is not of first importance. On the other hand, however, cases which are weakened by their disease should be given food and stimulants by the stomach at the earliest possible moment after operation.

Closure of the anastomotic opening. One of the gravest questions in intestinal surgery is the danger of subsequent closure of the artificial communication. This question cannot be settled until we have examined the seat of operation in a large number of cases which have recovered from the operation, but who have died subsequently at various periods of time. Although, as yet, but little has been done in this direction, still there have been a few such examinations made which may be referred to with advantage. Larkin * reported the results of a post-mortem examination upon a patient of his own who died five months after he had performed a gastro-enterostomy for malignant disease. He found upon filling the stomach with water that it passed into the duodenum through the pylorus, but would not pass into the intestine through the artificial communication. After opening the stomach he failed to detect any trace of the anastomosis. He then opened that portion of the jejunum which had been attached to the stomach, and was able, with a fine probe, to pass into the latter. The malignant disease had not involved the seat of operation. Jessett † lost a case on the fifth day after performing a gastro-enterostomy, and found upon post-mortem examination that the artificial opening was quite patent and healthy, and that the bone plates were nearly digested. Sainsbury ‡ lost a case on the second day after performing a gastro-enterostomy. The examination of the stomach after death showed a closure of the opening. He says: "The opening into the jejunum was patent when probed by the finger; but that there was an impediment which must have been valve-like is proved by the distended stomach, and the fact that water injected into the stomach before dissection did not escape into the jejunum." In this case rings or plates were not used, the anastomosis being made by a double row of sutures. Beaston || reports two cases upon whom he made post-mortem examinations following gastro-enterostomy. One of these patients died on the fourth day following operation. He found the bone plates "greatly acted on by the digestive fluids, being reduced to the thickness of the thumb-nail and broken up into small pieces both in the stomach and bowel. The knots of the uppermost lateral threads were plainly visible owing to the serous surfaces having fallen apart, probably on losing the support of the bone plates." The artificial opening he found would admit the forefinger. The second case died in four weeks after section from acute lung trouble. The artificial opening was found to be oval in shape, with smooth and

‡ *Lond. Lancet*, 1891, vol. i, p. 718.
|| *Lond. Lancet*, 1889, vol. ii.
* *Lond. Lancet*, 1890, vol. ii, p. 761.
† *Lond. Lancet*, 1890, vol. ii, p. 68.

* *London Lancet*, 1891, vol. ii.
† *London Lancet*, 1890, vol. ii, p. 68.
‡ *London Lancet*, 1891, vol. i, pp. 18–20.
|| *London Lancet*, 1890, vol. ii, pp. 761–764.

regular borders, and barely admitting the index finger. Keen§, in referring to a case operated upon by Dr. Abbe; in which a lateral anastomosis was made, says: "The opening was large and seemed ample. The patient died some months later, and it was found that the opening had narrowed and contracted so that ultimately there would have been complete obstruction."

In all of the cases just mentioned the incisions into the intestine and stomach were ample, measuring from one inch to one inch and a half in length. With the exception of Dr. Abbe's case the bone plates were used in all of them.

There are several factors concerned in causing a narrowing of the artificial communication following lateral anastomosis. First, the natural tendency of the tissues themselves to retract; second, the contraction of the cicatrix following the healing of the incision; third, the direct union of a part of the incision due to the immediate contact of its edges; and fourth, the opening into the bowel not being sufficiently large or of a proper shape.

The first of these causes cannot be avoided, as contractility and retractility are inherent properties of these structures. To prevent the contraction of the cicatricial tissue, Jessett* and Clarke† advise sewing together by a continuous suture, either of silk or catgut, the cut edges of the serous and mucous coats of the incised viscera. This brings the raw surfaces together, and is followed by direct union—an important fact, as it does away, to a great extent, with the formation of a cicatrix. This method of dealing with the edges of the incision will also prevent the danger of union from direct contact. Direct union of the cut edges of the bowel as a cause of closure of the opening has, I believe, been overlooked by surgeons. Its importance, however, can hardly be questioned. For instance, the case of Larkins, quoted in this paper, goes a long way toward the support of this theory. For how else could we explain the fact that five months after section the opening only admitted a fine probe, unless we admit that in the beginning the edges became in part united. Again, Mr. Larkins performed a jejunostomy upon this very patient nine weeks after the gastro-enterostomy, on account of symptoms of closure of the artificial opening, and she was then kept alive by feeding directly into the jejunum. It is hardly likely that a large incision in the nine weeks could become closed by the retraction of tissues and the contraction of the cicatrix alone. Furthermore, Beaston's two cases both point in the same direction—one dying the fourth day, and the opening only admitting the fore-finger, while the other barely admitted the index finger at the end of one month. In all of these cases long incisions were made, and their rapid narrowing certainly teaches us a lesson. I do not for one moment wish to be understood as stating that direct union of the edges is the only factor in the case, but I do wish to emphasize its importance as a cause. Dr. Keen* has made a suggestion of great practical value in the technique of lateral anastomosis. He advises, instead of making a simple slit, to pinch up the bowel and remove an oval piece. This plan, he believes, would lessen the danger of contraction taking place. While I do not believe that this suggestion would in any way lessen the amount of contraction, I do believe that it would, by lessening the danger of direct union of the cut edges, prevent to a great extent the tendency to closure. Another point of importance is, as suggested by Jessett, to pass the lateral sutures of the ring as close to the edges of the opening as it is consistent with safety. In this way the edges of the incision are kept wide apart. The length of the incision for an anastomosis should be from one and a half to one and three-quarters of an inch. An opening of this size, made oval in shape and having its mucous and serous edges united by a continuous suture, offers, I believe, the best chance of remaining permanently patent.

My experience has been that it is extremely difficult to cut out an oval piece of gut with scissors, as the opening is apt to be irregular or larger than we desire. I saw a well-known operator make this mistake, and he was obliged to narrow the opening by stitching it across with catgut. To overcome this difficulty I have devised a steel punch for the purpose. With this instrument we are able to make the opening of a definite size and its borders clean and sharp—factors of great importance. The incision is oval in shape, one and three-quarters of an inch long, one-half inch at its centre, and one-quarter of an inch across at each end. By having the ends of the opening abrupt instead of tapering, there is less danger of direct union.

§ Proceedings Phila. County Med. Soc., 1891, vol. xii, p. 93.

Brit. Med. Jour., Lond. 1891, vol. i, p. 1377.

†*Brit. Med. Jour.*, Lond, 1891, vol. i, p. 798.

*Proceedings Phila. County Med. Soc., 1891, vol. xii, p. 93.

In conclusion, I desire to call attention to the following points:

1. The necessity of frequently douching the seat of operation with warm sterilized water to prevent the dangers of infection and shock.

2. That rapidity in operating is of great importance for success.

3. That early feeding by the mouth should be employed in all cases, especially in those which are weak and exhausted.

4. That early feeding by the stomach does not add to the dangers of leaking, as the parts are perfectly secure if proper rings and additional sutures are employed.

5. That an important factor in causing subsequent closure of the anastomotic opening is a direct union between the edges of the incision.

6. That the danger of subsequent closure of the artificial communication is materially lessened by using a steel punch in making the opening, by stitching the edges of the serous and mucous coats of the bowel together, by placing the lateral sutures of the ring as close as possible to the margins of the incision, and lastly by making the anastomotic opening sufficient long and of an oval shape.—(*For discussion, see Society Reports.*)

SCROTAL HERNIA REDUCED AFTER THREE WEEKS' MANIPULATIONS.*

By A. B. HIRSH, M. D.

To illustrate the value of massage in this condition I here report the brief notes of a case recently occurring in practice:

A. L., aged forty-seven years, of medium height and sparely built, is predisposed to hernia because of his laborious calling, being a boiler-maker. In 1872, after lifting some weighty object, the gut descended through the right inguinal canal, appearing at the external ring. A proper support was immediately applied. As, however, no pain or inconvenience was felt, he gradually omitted wearing his trusses (of which a variety was used), so that the tumor finally became scrotal; although always reducible. Six years ago he first noticed that he could no longer return the mass, and he therefore left off the truss altogether; but at no time previous to last fall did it give him any concern, as the bowels always acted normally, and he was able to follow his trade without interruption.

Although for some years in attendance on the family, it was not until November last that I first learned of the existence of the hernia, and then he was already laboring under symptoms of obstruction. Prolonged efforts at reduction were of no avail, so that I advised radical measures. The scrotal mass evidently contained omentum as well as gut. He had been for three days without movement from the bowels, although active purgatives had been repeatedly taken, and fecal vomiting had begun some houre before my arrival. To the operation of herniotomy he objected decidedly, insisting on palliative measures alone, so that I was bound, with misgivings to accede. High irrigation by the rectal tube was done, carminatives given, the intestinal tract acted on by active salines and cholagogues, with relief to the fecal vomiting and more urgent symptoms. This purging was followed up daily for nearly a week, ice-bags constantly applied over the tumor, the foot of the bedstead elevated, and a diminished semi-solid diet allowed. Then the services of a masseur were called into requisition, seeking to loosen up any scrotal attachments of the mass, while I saw the patient only at occasional intervals to direct the cause of pressure by the manipulator, and by three weeks' longer efforts the entire mass was returned into the abdominal cavity for the first time in six years.* Every troublesome symptom had disappeared, and, by wearing his ordinary retentive truss he was again able to follow his ordinary occupation.

I wish, in conclusion, to briefly emphasize the facts that in some cases of hernia of long standing, unreduced, it may be presumed that adhesions had formed within the scrotum.

In such instances, where operation is declined, or the condition of the patient prevents it (provided a diagnosis of acute strangulation can be excluded), continued taxis may relax the parts or lengthen or break the adhesions, and allow of a reduction of the abdominal contacts.—(*For discussion, see Society Reports.*)

ARISTOL IN SCROFULOUS RHINITIS OF CHILDREN.

This drug (*Lo Sperimentale*, No. 23, 1891) is recommended as giving excellent results, if insufflated into the nose, in the scrofulous rhinitis of children. It is also of value in chronic eczema when given according to the following formula:

℞ Aristol.....grammes 10.
Lanoline (or) vaseline..... " 50.

*Read before the Philadedphia County Medical Society, March 9, 1892.

*I should state that each daily séance lasted about half an hour.

A SCIENTIFIC CURE FOR HERNIA.*

By BENJAMIN T. SHIMWELL, M. D.,
LECTURER ON SURGERY IN THE MEDICO-CHIRURGICAL COLLEGE.

All methods devised for the radical cure of hernia seek to reach their object by obliteration of the canal, and by this plan to retain the protruding gut. This is the treatment of effect, not of cause.

While fully recognizing the comparative frequency of this trouble, we must not overlook the fact that it is in the minority. As we are all subject to the same exciting causes we should look for some anatomical reason that will explain its occurrence and non-occurence, and why after operation, where fibrous tissue in apparent quantity existed, return was possible. There must be more than the production, or rather reproduction, of a canal from the abdomen to the scrotum to account for it.

The first thing, then, to consider is not the inguinal rings or canal, but the intestines, the prime factor in the case.

The intestines are not a tube lying perfectly free in the abdominal cavity, to be pushed here or there, making pressure at this or that point. If they were attached but to the pyloric end of the stomach and to the anus, then it could readily be seen how intra-abdominal pressure could possibly rupture any weakened point in the belly wall, with consequent protrusion of the gut. Instead of being so arranged their position and action are limited by the folding around them of the peritoneum forming the mesentery.

Careful examination of the body in the dead-room fixes a normal relative position for this limiting membrane. Its point of attachment to the parietes begins to the left of the second lumbar vertebra. Its insertion then follows a line obliquely downward and to the right, to attach itself on the right iliac fossa. Its average length is eight inches; an increase above this is an abnormal state, and on this increase in length depends the production of hernia. The examination of numbers of bodies has proved beyond cavil that when a normal condition of the mesentery exists, it is impossible to drag the gut into the inguinal or femoral rings.

Is it scientific to say it is chance that prevents the whole human race from having hernia? Also to lay it to the firmness of attachments of the opposing surfaces of the inguinal canal, or the structures that cover a present hernia? The pushing forward of the superimposing layers of the tissue and separation of the obliterated canal speak ill for its preventive power. If they are preventive, then the sudden rupture would give us more serious consequences in primary protrusion than experience shows. The canal does not show the after-conditions that follow usually from tearing, which would be excessively marked here if strong union had taken place. Neither subjective or objective symptoms are present. It is coaptation, not union with firm tissue formation.

It is clear to my mind that the normal length of the mesentery is the preventive factor in the non-production of hernia. If not so, then no one would escape. The exigencies of life and our surrounding conditions are such that all of us at times are subjected to violent strains, giving rise to intra-abdominal pressure sufficient to rupture the internal openings, and to allow the gut to enter the canal.

If these assertions are true, then any operation which has been suggested does not prevent, but modifies. Therefore, any procedure seeking to prevent hernia by obliteration of the sac does not cure. The possibility of return exists.

What is the rational treatment? The opening of the abdomen and shortening of the mesentery. The width of the mesentery does not increase in adult life, but the length is liable to.

The opening of the abdomen and shortening of the mesentery may be objected to on the ground of possible risks. The safety of the operation of abdominal section is settled. The shortening of the mesentery offers no objections. It may be said that the blood-supply of the intestines may be interfered with. Careful experiments show the reverse.

Further, to prove that peritoneal inflammatory changes do not affect the blood-supply is instanced in the omentum after diffuse peritonitis. Operations during the acute stage and post-mortems have shown me conclusively the possibility of contraction occurring without strangulation. In every case of acute peritonitis, unless adhesions have taken place, or, in fact, any case where the omentum has been much handled, we always find it drawn up to its gastro-duodenal attachment as a knotted mass. Still its vitality is maintained. Also the invaginated mesentery into the divided bowel, in the operation of intestinal anastomosis, does not lose its vitality by contraction and imflammation. Here there is not only change by contraction

*Read before the Philadelphia County Medical Society, March 9, 1892.

due to the invagination, but also thickening from the inflammatory products thrown in and about its attachment. That this portion of the mesentery still supplies the bowel with blood is proven by the number of experiments I made, to show the division of the mesentery at the point of invagination caused gangrene. This proves that though changed in its structure pathologically, it does not interfere with its nutritive function as a carrier of blood.

It is understood that the value of an operation lies as much in its freedom from risks as in its ability to maintain its advantages when successful. The freedom from risk has been one of the so-called advantages claimed for the radical cure suggested. Can this be truly said of these methods? It is not always in the province of any operator to say when the operation is finished that he has not divided the spermatic duct. This is not recognized in unilateral operations, providing the other organ and duct is viable, but if not, or if in any subsequent time inflammatory changes take place, it is plainly seen the disadvantages that would arise. There is also the possible atrophy of the testicle from injury to its nerve-supply. Then, again, sharp attacks of peritonitis have occurred with consequent changes. There is law of serous cavities that is definite: "Any inflammation, unless limited by adhesive contact, is diffused over the whole surface." This will hold good here as in an operation done through section.

The largest part of the mesentery is usually confined to about five feet of the bowel included in a space beginning at a point six feet from from the duodenum. If this is above the average length it is apt to hang into the pelvis, and is, in all probability, the portion protruded. It is but reasonable to suppose it is the same loop that is recurrent in its extrusion. There would be no difficulty in locating this portion, as the hernia would be present.

The shortening is done by folding the mesentery over on itself, and holding in this position by interrupted sutures. The intestine can be delivered, folded, sutured, and then replaced, and successive portions so operated upon. This is a step that of necessity requires experience in handling the intestine that is only got by practice. The delicacy of the mesenteric tissue is understood. The union of the attached surfaces is rapid, and having been so shortened, there is no possible relengthening. Experiments, operations, and post-mortems in cases which had peritonitis show persistent shortening of the mesentery, the intestines being drawn nearer the spine.

The operation can be done perfectly aseptic, obviating risks. The bowel is not injured. It is done quickly, closure is made, and the patient out of bed in a few days.—(*For discussion, see Society Reports.*)

A BONE IN THE THROAT: TWO CASES.

By PROF. T. S. WIGHT, M.D.,
BROOKLYN, N. Y.

I wish to make a note of two cases which recently came under my observation: one, of a patient who said she swallowed a bone; and one in which a bone was found in the throat. I am induced to report these cases because the subject is always important, and because the treatment in one differed from that in the other.

Case I. A middle-aged woman of hysterical temperament thought she had swallowed a bone; and felt it in her throat, as she pointed out, near the top of the sternum. Her family physician could not make her believe that the bone was not in her throat, and so she continued to feel it for several days. I saw her, and after the doctor gave me the clinical history, and when I made an examination, I told her that she was mistaken as to the bone being in her throat; and I told her that as the bone went down it scratched her throat, and that she still felt the scratch. After I passed a tube through the œsophagus into the stomach she felt much better, and came to the conclusion that the bone had gone into the stomach. In a few days she entirely recovered from her depressed and anxious state, and was soon as well as ever.

Case II. Recently a very stout gentleman came into my office saying he had a bone in his throat. He had every appearance of being a true sufferer: he had difficulty of breathing and was expectorating somewhat profusely. On inspection I could not see anything in his throat. Then I wound a bandage around my left forefinger, leaving the end of it exposed, and passed it into his throat as far as I could; I thought I could feel a small bone on the left side down as far as my finger reached. The object of the bandage was the protection of the finger against the action of the patient's teeth. Then I passed down a pair of angular throat forceps, and closed them upon what seemed to be the foreign body. The mucous membrane got slightly nipped, and as I withdrew the instrument its jaws tightly held the piece

of bone, which was exactly seven-eighths of an inch in length and about one-twentieth of an inch in diameter. The relief was immediate.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting, March 9th, 1892.

Dr. Noble read a paper on "A Year's Work in Minor Surgical Gynæcology at the Kensington Hospital for Women," (see next issue of REPORTER.)

This was followed by an article by Dr. Ashton on "A Successful case of Lateral Anastomosis of the Ileum for Malignant Stricture, with a discussion of the Operative Technique." (see p. 565.)

DISCUSSION.

DR. J. M. BARTON: I agree with what Dr. Ashton has said in almost every particular. There are one or two points, however, to to which I would like to call attention.

The Doctor has spoken of the importance of keeping the abdomen open for the shortest possible time during an operation. I fully agree with him in this, and in my own abdominal operations I often sacrifice something to secure brevity of operation.

To make the operation as short as possible it would be very convenient for us to know, before opening the abdomen, exactly what we have to do. With our present knowledge this is impossible, but the history, even now, will often throw some light on the nature and seat of the obstruction.

Under all circumstances, the history in each reported case ought to be carefully recorded, not omitting apparently unimportant details, so that in the future, in similar cases, the diagnosis may be fairly accurate before surgical interference.

The vomiting in this case, unaccompanied by any tenesmus, was rather unusual. Where the obstruction is so low, tenesmus is more apt to be a permanent symptom than vomiting. The rapid emaciation would point to malignant disease. The sweating also would be suggestive of a far advanced maglignant growth or encysted pus.

I fully agree that the feeding should be begun early. In my stomach cases, where the danger of giving food early is greater than in intestinal injuries, I have found that where I was compelleed by the condition of the patient to give food at once, it was well borne. Examining the literature of the subject, I found that the cases that were fed early did not seem to suffer thereby. Where the operation is some distance from the stomach, there is no reason why food that should be absorbed by the stomach should not be used at once.

The Doctor has suggested that the narrowing of the opening may possibly be due to immediate union. In the history of the cases that were examined a few days after operation it does not appear that the opening was materially contracted, while in those examined some months after operation it was found firmly contracted. Where the operation it performed for non-malignant disease, and the patient is expected to live for some time, this contraction of the opening is of the utmost importance. I doubt whether the removal of an oval piece will prevent it. I am not prepared to make any suggestions, but this is one of the difficulties which I fear we shall find trouble in overcoming.

DR. B. T. SHIMWELL: Reference has been made to the use of sutures around the point of anastomosis. I have had considerable experience experimentally with operations on the bowels, and I find that the moment you interfere with the bowel paralysis occurs. In the paralyzed portion of the bowel no gas or fecal matter will enter. I therefore cannot see the necessity for sutures. When perfect coaptation with the ring is made one or two additional sutures is all that is needed, and I cannot understand why we should spend time in putting in these extra sutures, for it requires some time for the bowel to regain its normal tone. If the sutures are well applied and are well tied you have close coaptation, and adhesion is so rapid that there is firm union by the time the tone of the bowel is regained.

DR. JOSEPH HOFFMAN: I have often heard those gentlemen who do anastomosis talk about paralysis of the bowel as a necessary sequela to interference with the intestine. In ordinary abdominal surgery, where adhesions of the bowels are often extensive, we do not get paralysis even when we had to stitch down to the mucous coat. I have seen cases where it was necessary to stitch six or eight inches of the bowel down to the mucous coat, and the patient has recovered without paralysis of the bowel. I should like to know what the interference is which is supposed to cause paralysis of the bowel.

DR. J. PRICE: This matter of paralysis is an interesting one, and I am inclined to

ask the same question that Dr. Hoffman asked. Paresis of the bowel requires something more than local interference. If simple anastomosis with a few sutures is responsible for the paresis it is surprising that we do not have this condition in those extensive lesions of the bowel which we often have to deal with in suppurative and extensive disease. We often have to separate many inches of the bowel, and often have to stitch up lesions, but we do not see the least paresis. There is no perceptible distension. I am therefore surprised to hear gentlemen speak of paresis of the bowel following a few fortifying stitches in resection or in anastomotic work. It never occurred in my work, and I no longer look for it if the cases have been carefully prepared.

There is just one point in connection with anastomosis—not that I wish to criticise enthusiastic investigators or experimenters, but I desire to call attention to one very important point in intestinal surgery. If you can possibly get along without resection or anastomosis, always do so. You will find that men like Martin, Lawson Tait, Bantock, and Thornton make a resection or an anastomosis only exceptionally. Some years ago I did more resection and anastomosis than I do at present. I constantly finish an operation with the bowel with a lumen not larger than a crayon. I do not hesitate to reduce the bowel in its normal axis. I have never had any obstruction follow anastomosis. The results have been most satisfactory, and some of the cases are of three or four years' standing. I might allude to one case: Last summer I operated upon a woman who was said to have rheumatism of the ovary. Her pelvis was simply full. It contained all the pus and viscera that you could get into it. One of the abscesses had perforated, causing a mesentery abscess, which had perforated the bowel at two points, the two openings being about four inches apart. The portion of the bowel between the openings was quite gangrenous. There I was driven to resection and took out six inches of bowel and V-shaped a portion of mesentery. I found that the mesentery was too thick for inversion, and I therefore stitched the bowel carefully, and six inches above the resection made a lateral anastomosis cutting out diamond-shaped pieces of the bowel. This woman never had a bad symptom. She passed flatus in twenty-four hours. There was enormous distension at the band of the resection. She made a perfect recovery, and is now doing her domestic work.

Dr. M. Price: I think the operation of anastomosis can be materially shortened by using Mrs. Supplee's sewing-machine needle, which I have suggested for passing the sutures. In this way the six sutures can be passed in a minute and a half. It obviates the entanglement of the sutures, which are apt to occur when the needles are threaded before the operation, and does away with the time used in threading them during the operation.

I congratulate Dr. Ashton on the recovery of the patient. I think that these are the most serious operations that we are called upon to do. In most cases the disease has already gone so far that resection is out of the question. By this operation he has unquestionably lengthened that woman's days and probably made her death much more comfortable. Some years ago I resected some six inches of the colon for epithelioma. The woman is still perfectly comfortable, and I have no doubt that her life has been prolonged several years. There is no doubt that if the operation is done by a man familiar with the work, 95 per cent. of recoveries can be counted on. Suture of the intestine is one of the safest procedures in surgery.

I think that Dr. Shimwell is probably wrong in regard to paresis. I think we are justified in using every precaution, and the introduction of the ring should be supplemented by a whipped suture and reinforced over all by a Lembert suture. I have no hesitation whatever in saying that the operation is justifiable in cancer and is the only one left for us to do.

Dr. Ashton: While an early exact diagnosis is of importance, yet it is impossible in the large proportion of cases to make it. Even if we do not make an exact diagnosis, the opening of the abdomen causes very little harm if done as an exploratory incision.

In regard to the closure of the opening, I would say that some of these cases were examined as early as three or four days after operation. I cannot understand how an incision which is one and a half inches in length should in three or four days become so small that it would admit only the index finger, unless there had been primary contact and union.

I cannot agree with Dr. Shimwell in reference to intestinal paresis. I have never seen the condition follow even extensive injuries of the intestines. There is more shock to the bowel in severe injuries to the intestines in some pelvic case than in anastomosis. I agree with Dr. Joseph Price that we should not make an anastomosis if we can possibly

avoid it. I never hesitate to narrow the calibre of the bowel provided I do it in the direction of its long axis.

Dr. Shimwell then read a paper entitled, "A Scientific Cure for Hernia." (see p——.)

Dr. Joseph Hoffman: Dr. Shimwell's suggestion can certainly claim the merit of being new, but any procedure which strives to cure hernia by it must fail. If the portion of bowel that presented was always the same, the procedure might be logical. It is however, founded upon a false conception of the condition present. These conditions probably do not obtain in the greatest number of cases, and consequently the methods cannot be really a cure for the condition. Other things besides the bowels may constitute the hernia. In woman, the ovary may be present. The appendix may get into ring, and shortening of the mesentery will hardly cure that. Further than this, the omentum may constitute hernia. This is a prolific cause of hernia. It is probably at the bottom of most hernias primarily, and in many cases it precedes the bowel. We often find nothing in the ring. Strangulation has occurred and the gut slipped back, and the strangulation is back of the ring.

So far as considering shortening of the mesentery as a cure for hernia, we must understand what we mean by cure. Those who have done the most radical operations for hernia are not bold enough to say that they have cured a case—that is to say, so cured it that it will not come back. It cannot be held that such an operation will cure the predisposition for lengthening of the mesentery. So far as shortening of this tissue by inflammation is concerned, that is entirely theoretical. We cannot say that because the mesentery is thickened, it is shortened. The suggestion, while it has apparently a foundation in fact, must be taken entirely as experimental, and experimental in the line that it is not likely to be followed by practical results.

Dr. George E. Shoemaker: It is easy to decry anything which is unusual, yet every method must stand on its own merits. No consideration of this subject is complete which ignores the congenital defects of the ring, since these are at the bottom of many hernias. We find congenital hernia in the very young. Later in life the rings may be too large and weak from congenital defect, although no hernia is present, but a strain is suddenly thrown upon the parts and a hernia is produced. Such a shortening of the mesentery as would draw the intestine away from the abdominal wall is inconceivable under the physical laws which control intra-abdominal pressure; and with the intestine in contact with a weakened point protrusion is always possible.

Dr. T. S. K. Morton: Several years ago, a London surgeon—I think Mr. Morris—wrote quite an elaborate thesis on the subject of the mesentery and its relation to hernia. He apparently demonstrated that in the cases of hernia which he had examined there was distinct lengthening of the mesentery, which seemed to be peculiar to such cases. He found this in the very young, and he urged that the lengthening of the mesentery had a great deal to do with the occurrence of the hernia. I have seen this statement incorporated in one or two textbooks, and it seems remarkable that no one has before this thought of suggesting the operation of doubling the mesentery on itself to prevent the occurrence of hernia. I understand that Dr. Shimwell has done this operation upon animals with satisfactory results.

In this connection the recent suggestion of Mr. Tait in regard to treatment of hernia by abdominal section comes up with special force. If, as Mr. Tait tells us, it is exceedingly easy to draw the hernia back even when tightly strangulated, and if, at the same time we can shorten the mesentery and cure the hernia, and also deal with any prolapsed omentum, it would be a distinct advance in surgery. The method is not applicable to all cases of hernia. If the operation has any field it is in inguinal, and especially in femoral hernia. Dr. Shimwell has thrown out a very valuable suggestion, and I should hesitate very much to condemn the method until I had heard more about it.

Dr. Shimwell: I did not attempt to apply this method to all hernias. I think that any case in which the hernia can be maintained by a truss should not be operated upon. The method was suggested for those cases in which a radical cure was indicated. The method, of course, is applicable only to intestinal hernia. When we find omentum in the sac we do not hesitate to remove it. In peritonitis the omentum is contracted, and is found high up in the peritoneal cavity, and is of no use. The occurrence of congenital hernia is no objection to the method. The difficulty may not be originally in the canal, but the lengthened mesentery may permit the bowel to so press upon the canal as to weaken it. It seems folly to tinker with the canal and not try to remove the cause.

Dr. A. Hirsh read a paper on "The Reduction of Scrotal Hernia After Three Weeks Manifestations." (See page 570.)

Dr. Charles P. Noble: Last year I saw, in consultation with Dr. VanBuskirk, a woman who had fecal vomiting. She had a femoral hernia which had been strangulated for four days; she also had chronic bronchitis, and had a large goitre. Efforts at taxis had been made repeatedly without success. Operation was advised, but in view of the duration of the strangulation and the presence of bronchitis and goitre, the prognosis was unfavorable, and the family declined operation. The hernia remained down some days longer and then went up of itself, and the bowels moved, and apparently the woman was going to get well, but the prolonged obstruction had produced so much asthenia that she died of pneumonia. An interesting point is the length of time the bowel was down and then returned spontaneously.

Dr. M. Price: I admire Dr. Hirsh's confidence and energy, but I do not admire the treatment. The other night I was called to Trenton, N. J., to operate on a gentleman who had been treated for four days by a homœopath for stomach trouble, and was vomiting feces. Another physician being called found an inguinal hernia and telegraphed for me; I immediately etherized the patient and cut down upon the hernia, which was not even discolored. It was down in the scrotum; it had been there for months. It was not strangulated, although tightly held at the inguinal ring. A mass of hardened feces in the bowel was the cause of obstruction; there were no adhesions anywhere. I am confident that Dr. Hirsh had an obstructed but not a strangulated bowel. Most cases of strangulated hernia end in death no matter what procedure is adopted; I have never seen a case where four or five inches of the bowel were gangrenous, recover. Obstructed or incarcerated bowel is really the condition which is reported hernia.

The idea that a hernia can be easily reduced through the median incision is a mistaken one. I operate in the median line for doubtful femoral and inguinal hernia—that is, where there is a little tumor in these situations without evidences of incarceration. In such cases I have never been able to reduce the hernia from the inside; I have had to cut down over the tumor. In doing that, you have an excellent chance for making a radical cure. I have operated on a number of cases in this way, and there has been no return of the hernia.

Dr. Joseph Hoffman: Some years ago I had a case of inguinal umbilical hernia in an old lady, who had been seen by probably a dozen men; I was called in, and I massaged that hernia for four days, and I thought I had cured it. In two or three days I was called, and found that the patient was vomiting fecal matter; the trouble was that the hernia had returned *en masse*. This case shows the danger of attempting to cure strangulated hernia by manipulation. We may reduce the hernia without relieving the obstruction. Where the hernia has lasted for any length of time it is not safe to try to reduce it. Some two months ago I had a case where. if I had attempted to withdraw the hernia, I should have drawn back first a strangulated bowel nearly gangrenous with two inches of gangrenous omentum and two or three ounces of gangrenous fluid.

Dr. Hirsh: I should not advocate massage as a universal remedy in recent or old hernia. In this case it was applied because the family refused more radical procedures. The hernia having remained in the scrotum for six years, it is certainly fair to assume adhesions had formed, and the fact that three weeks were required in separating the strictures and in returning the mass makes one believe that there must have been adhesions to stretch. I was very careful to mention that it was an obstructed bowel, and not that actual strangulation had taken place.

TENDON GRAFTS INTRODUCED BETWEEN THE WIDELY SEPARATED ENDS OF DIVIDED TENDONS.

Dr. Rochet (*Gaz. hebdom. de méd. et de chir.*, June 20, 1891) obtained a very happy result in a case in which the ends of divided tendons of the superficial and deep flexors of the index fingers could not by any means be brought within two centimetres of each other. The proximal and distal ends were exposed in the usual manner. An incision was then made on the palmar surface of the finger at the joint of the phalanges, where the tendon of the profundus passes between the two lips of the tendon of the sublimis, and the tendon of the profundus was divided at this point. The portion of the tendon thus cut off was drawn out of its sheath, its upper end sutured to the proximal portions of the tendons of the sublimis and profundus, its lower end to the distal portion of the tendon of the sublimis. The proximal end of the small portion of deep flexor tendon which remained between the point where it pierces the sublimis and its insertion was then sutured to the lateral lips of the sublimis tendon. The patient recovered with good use of the finger.—*N. Y. Med. Jour.*

SELECTED FORMULÆ.

PILL FOR INTESTINAL ANTISEPIS.

℞
Creolin.....grammes 12.
Alcohol. dilut.,
Pulv. tragacanth.....āā " 2.
Succ. glycyrrh.,
Pulv. glycyrrh.....āā " 24.
M. et ft. pil. no. cc. Two pills at a dose two or three times a day.

From *Petit Formulaire des Antiseptiques*, par L. A. Adrian.—*Le Progrès Médical.*

PHOSPHORUS IN RACHITIS.

Mettenheimer proposes the following formula, which he considers superior to that of Kassowitz (phosphorus, 1 ctgr. in 100 gm. of almond oil):

℞
Phosphorus.....ctgr. 0.01.
Ol. amygd. dulc.....gm. 0.30.
Pulv. sacch. alb.,
Pulv. gummi arab.....āā gm. 0.15.
Aq. dest..... " 0.40.
M. Sig. Teaspoonful at dose.

—*Nouveaux Remèdes.*

ABSORBENT POWDER.

℞
Salicylic acid.....ʒ i.
Starch.....ʒ ii.
Talc.....ʒ i.
S. To dust on the parts of the body which are affected in the night sweats of phthisis.

—*Union Médical.*

PILL ANTECIBUM.

This is a pill of the French Codex prepared as follows:

℞
Pulv. aloes (Cape).....ʒ ijss.
Ext. cort. cinchonæ.....gr. lxxv.
Pulv. canellæ.....ʒ ss.
Syr. absinth.....gs. xlv.
M. Ft. pil. no. 100.

DANDRUFF.

The following pomade is recommended in the treatment of dandruff:

℞
Acidi salicylici.....ʒ ss.
Sodii boratis.....grs. xv.
Bals. peruviani.....♏ xxiv.
Ol. anisi.....♏ v.
Ol. bergamot.....♏ xv.
Vaselini.....ʒ iij.
M. et ft. unguentum.

—*Med. Record.*

VOMITING, FROM ANY CAUSE.

℞
Cocaine muriate.....gr. ij.
Aquæ calcis,
Aquæ cinnamon.....āā ʒ j.
M. Sig. Teaspoonful every half to one hour.

TYPHOID FEVER.

℞
Acid carbolic.....ʒ ss.
Chloroform.....ʒ j.
Gum acacia.....ʒ j.
Syrup, q. s.....ʒ iv
M. Sig. Teaspoonful three or four times daily. If there is a tympanitic condition of the bowels it disappears at once.

—*I. J. Bush, M.D., in Med. Ann.*

OBSTINATE CHRONIC SKIN DISEASES.

℞
Acidi chrysophanic.....ʒ j.
Lanoline.....ʒ j.
M. Sig. Apply at night on going to bed, and wash off in the morning.

ANURIA OF SCARLATINAL NEPHRITIS.

Dr. Starr recommends the following mixture:

℞
Ext. jaborandi fld.....grammes 15.
Potass. citrat....." 25.
Aquæ dest....." 75.
M. Sig. Teaspoonful every four hours.

AGARICIC ACID IN PHTHISICAL NIGHT-SWEATS.

℞
Agaricic acid.....grammes 0.2.
Glycyrrhiza extract.,
Glycyrrhiza powder.....āā q. s.
Sig. Divide into 10 pills. Two pills two hours before bedtime.

—*Merck's Bull.*

CARDIAC TONIC.

Dr. J. O. Hirschfelder, San Francisco, in a clinical lecture recommends the following:

℞
Caffeine,
Benzoate of soda.....āā ʒ i.
Strychnine.....gr. 1-5.
Camphorated water.....ʒ vi.
S. Tablespoonful three times a day.

POST-PARTUM ECLAMPSIA.

Dr. Strisover (*Mediz. Oboz.; Le Bulletin médical*, No. 5, 1892) advises subcutanous injections of the hydrochlorate of pilocarpine in post-partum eclampsia. He has treated ten cases thus, without a single death. He employs the following solution:

℞
Pilocarpine muriate.....cgms. 5.
Water.....gms. 4.
Inject a Pravaz syringeful at once.

He concludes as follows:

1. The hydrochlorate of pilocarpine is a certain remedy in eclampsia.

2. Cardiac weakness is no contra-indication to repetition of the injection when the spasms reappear.

3. Abnormal contraction of the pupil indicates that the disease is still at hand and that spasms are imminent.

COD LIVER OIL EMULSION.

℞
Cod liver oil.....fl. oz. 8.
Yolks of two eggs,
Tragacanth in powder.....grains 16.
Tincture of benzoin.....fl. dram 1.
Spirit of chloroform.....fl. drams 4.
Essential oil bitter almond.....minims 8.
Water to make.....fl. oz. 16.

Rub the tragacanth with a small quantity of the oil, then add the egg, and with constant trituration water and oil alternately and the flavoring ingredients until the emulsion is completed. About two fluid ounces of water will be needed.—*Br. and Colonial Druggist.*

REFRIGERANT LANOLINE OINTMENTS.

Unna has found that if lanoline fat and water be mixed in certain proportions the water easily evaporates, thus producing a cooling application:

1. Ointment to be used as a cold cream:

℞
Anhydrous lanoline.....parts 10.
Benzoated lard..... " 20.
Rose water..... " 30.

2. Imitation of Goulard's cerate:

℞
Anhydrous lanoline.....parts 10.
Benzoated lard..... " 20.
Solution subac. of lead..... " 30.

3. Salve for burns:

℞
Anhydrous lanoline.....parts 10.
Benzoate lard..... " 20.
Lime water..... " 30.

4. Refrigerant zinc ointment:

℞
Anhydrous lanoline.....parts 10.
Benzolated zinc ointment. ..... " 20.
Rose water..... " 30.

—*American Practitioner and News.*

HEADACHE POWDERS.

No. 1.

℞
Acetanilid.....drams 7.
Caffeine.....dram 1.
Sodium bicarbonate.....drams 2.

No. 2.

℞
Phenacetin.....grains 10.
Caffeine.....grain 1.
One dose.

No. 3.

℞
Acetanilid.....grains 3.
Caffeine.....grain 1.
Sodium bromide.....grains 7.
One dose.

No. 4.

℞
Acetanilid.....part 1.
Phenacetin.....parts 2.
Antipyrin..... " 4.
Dose 8-16 grains.

This combination has been found serviceable in specially obstinate cases of neuralgic headache.

Headache Capsules:

℞
Antipyrin.....grains 540.
Caffeine..... " 90.
Extract cannabis indica..... " 16.
Hyoscine hydrobromide..... grain 1.
Make into 30 capsules and give one every 1 to 3 to 5 hours.

Headache Mixture:

℞
Caffeine.....grains 20.
Ammonium carbonate. ..... " 20.
Elixir guarana.....ounce 1.
One dram every hour until relieved. For neuralgic headaches.

—*Western Druggist.*

LINSEED OIL EMULSION.

℞
Linseed oil.....fl. ounces 15.
Oil wintergreen.....fl. drams 2.
Oil cinnamon.....fl. " 2.
Powd. acacia.....ounces 10.
Water.....fl ounces 24.
Glycerin.....fl. " 5.
Simple syrup.....fl. " 10.
Dilute hydrocyanic acid.....fl. drams 2½.

PRURITUS ANI.

Dr. Josenh M. Matthews has obtained excellent results from:

℞
Benz. oxide zinc oint.,
Campho phenique.....āā ʒ ss.
M. Apply as often as necessary.

The campho-phénique may likewise be used pure, without detriment to skin or mucous membrane.—*Medical Bull.*, Feb., 1892.

FOR BALDNESS.

One of the best combinations in the treatment of baldness consists of:

℞
Pilocarpinæ hydrochlorat.....gr. v.
Otto de rosæ.....ℳ viij.
Olei r smarini.....f ʒ iv.
Liniment. cantharid..... .....f ʒ iv.
Glycerini pur.....f ʒ j.
Olei amydal. dulcis.....f ʒ ij.
Spts. camphoræ.....f ʒ iij.
M. S. To be rubbed well into the scalp, night and morning.

—*Whitla.*

COMPOUND ELIXIR OF CHLOROFORM.

The following formula (*The Prescription*, No. 1, 1892) is spoken highly of in cholera morbus and kindred complaints:

℞
Ol. cinnamon.....gtts. x.
Chloroform,
Tinct. opii
Tinct. camphoræ,
Spirit. ammon. aromat.....āā fl. ʒ vj.
Spirit. frument.....fl. ʒ jss.
One-half to one teasp onful as a dose.

POWDER FOR CORYZA.

Dr. Capitan offers the following formula:

℞
Salol.....grammes 1.
Salicylic acid..... " 20.
Tannic acid..... " 10.
Boracic acid (pulv.)..... " 4.
M.

At the beginning of the trouble a pinch of this powder is to be strongly drawn into each nostril, and the treatment should be given every hour for half a day.—*Bull. Pharmacy.*

ALLINGHAM'S OINTMENT FOR HÆMORRHOIDS.

℞
Bismuth. subnit.....ʒ j.
Hydrarg. chlor. mit.....ʒ ij.
Morphinæ.....gr. iij.
Glycerini.....ʒ ij.
Vaselini.....ʒ j.
M. Sig. Use in pile-p pe.

INDIGO AS AN EMMENAGOGUE.

Dr. Jones (*Le Bulletin Médical*, No. 82, 1891) has used indigo successfully in thirteen cases as an emmenagogue. He uses the following formula:

℞
Pulv. indigo.....grammes 8.
Bismuth. subnitrat..... " 2.
One-half teaspoonful three times a day for four weeks.

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LEADING ARTICLE.

TYPHUS FEVER IN NEW YORK AND NORTH BROTHER ISLAND.

The typhus "scare" is by no means over in New York. New cases from entirely unsuspected quarters are continually cropping out, and North Brother Island is teeming with patients. The New York Board of Health has been laboring indefatigably, and the zeal of Dr. Edson cannot be too highly spoken of.

It is an open war between the deadly germ of typhus and scientific health regulations, and the result, merely from a scientific point of view, is of vast interest to the profession.

What is giving the New York Board of Health as much trouble at present as the typhus itself, is the untrustworthiness of many of its employes. The recent exposures of the *New York World*, regarding the utter lack of systematized work or precautions at North Brother Island, which accusations have been in the most part acknowledged by the physicians in charge and abundantly confirmed by the sworn statements of many nurses and attendants, are truly startling. Even when allowing liberally for the heightened coloring usually placed upon such reports by the modern newspaper reporter, there is, nevertheless, no getting around facts.

On the night the *World* reporters visited the Island, it is stated that one nurse had charge of 32 cases of typhus, and was unassisted, and that he was compelled to assist in the removal of the two patients who died during the night and was compelled to be absent from his patients for two or three hours. It is also claimed that his only instructions were a supply of stimulants, opiates and straps to be used at his own discretion. The straps were for delirious patients. True also that ward after ward was visited without finding any attendant or nurse.

But worse than this, all the attendants take their meals at one table in the same dining-room. Here measles, smallpox and scarlet fever nurses sit side by side with the typhus nurses. The regulation of wearing

gowns in the wards and removing them at meals has not been strictly enforced, and many nurses have come direct from their infected wards without change of clothing and mingled with the attendants of the other wards of diphtheria, measles, etc. Not even the washing of hands is required.

Another flagrant fault is that the diagnosing of suspected cases of typhus among the quarantined patients is largely left to an unqualified attendant, who merely takes temperatures, and only reports very high ones. The fact that typhus may exist for some time with a temperature of not over 100° reveals the possibility of the *World's* accusation as to several cases of typhus among the quarantined patients not having been discovered for 12 to 72 hours, being true.

These are only a few of the charges made against the management of North Brother Island, and which when the light of searching inquiry is turned upon them we surely trust will either be disproved or else speedily remedied if true.

In the enforcement of public health by the isolation of infectious diseases and quarantine, the authorities need the active assistance of the public, and to gain their assistance must first win their confidence, and the exposure of such conditions as have been reported to have been found on North Brother Island, can surely only win distrust and fear.

Who among the laity, aye, or even among the profession itself, would not hide their sick rather than to see them ruthlessly taken to a pest house, where they believe they will be exposed to infection from other diseases, illy cared for, and perhaps strapped to their mattressless cots while suffering with thirst or even dying? Humanity itself cries out against such a course.

The enforcement of Health Regulations at best would seem cruel to the uneducated public, and they should at least know that these stringent measures only mean greater care and comfort to the patients than that which they could possibly receive at home.

It is to be regretted that the investigations of the *N. Y. World* could not have been made by the proper authorities, and the faults prevented rather than discovered and checked; but for some unaccountable reason this is seldom done, and nothing remains but public exposure.

In conclusion we would say that we sympathize most heartily with the physicians of the New York Board of Health, and fully appreciate the difficulties which beset them, but at the same time we must commend most highly the unsensational, reserved and fair method with which our esteemed lay contemporary, the *N. Y. World*, has done its work; and, as has been said, we trust soon to learn that the serious faults now existing at the North Brother Island will be entirely remedied.

OBITUARY.

DR. D. HAYES AGNEW.

Dr. D. Hayes Agnew died at his residence in Philadelphia, on March 22d, after a brief illness.

Dr. Agnew was born in Lancaster county, Pennyslvania, in the year 1818, and received his early education at the Moscow Academy, in Chester county, at Jefferson College, Cannonsburg, Penna., and Newark College, Newark, Delaware. He received his medical education at the University of Pennsylvania and graduated in 1838. After receiving his medical degree he began the practice of his profession in Lancaster county, but after a short time he withdrew from the practice of medicine and engaged in the iron business. This venture proving unsuccessful he returned to Philadelphia and here resumed the practice of medicine, and at the same time began to teach anatomy at the Philadelphia School of Anatomy, on Chant street. It was here that he showed his great ability as a teacher, as was evident by the large classes of student which were drawn to his lectures and demonstrations from the University and Jefferson Medical Schools.

He was appointed Surgeon to the Philadelphia Hospital in 1854; Demonstrator of Anatomy and Lecturer upon Clinical Surgery in the University of Pennsylvania, in 1863 Professor of Operative Surgery in the same institution, in 1870; and in 1871 was elected to the position of Professor of Principles and Practice of Surgery in the University of Pennsylvania, which position he held until 1889.

Dr. Agnew laid the foundation of his great reputation as a teacher of anatomy in the Chant Street School, and it was here that he trained himself as a practical anatomist; a training which fitted him to conduct in a most brilliant and successful manner the extensive surgical practice which afterwards fell to his lot.

Dr. Agnew also served as Surgeon to the Wills' Eye Hospital, the Orthopædic Hospital, the Pennsylvania Hospital, and as Honorary Surgeon to the Presbyterian Hospital.

Dr. Agnew's great work upon Surgery, the preparation which occupied some of the busiest years of his life, remains as a monument to his industry and acuteness as a clinical observer.

As a teacher of anatomy and surgery Dr. Agnew was noted for the clearness of his teaching, and those of us who had the fortune to attend his lectures can recall with pleasure his clear and forcible exposition of the subjects which he treated, and this was nowhere better shown than in his lectures upon hernia, fractures and dislocations.

As an operator he was most graceful and skilful, having the rare faculty of using either hand with equal facility; the writer has frequently seen him shift his knife from the right to the left hand in the operation of lithotomy. It would be impossible to note the many operations in which his skill as an operator was demonstrated, but it has always seemed to us that in no operations was his delicacy of manipulation more clearly shown than in the removals of tumors from the neck and in the ligation of arteries in their continuity. As a diagnostician he possessed rare ability, the accuracy of his power in this respect in the diagnosis of abdominal disorders being most remarkable.

That all important attribute of a surgeon, good judgment, he possessed in an extraordinary degree, and it was this characteristic combined with his personal attributes which made him so popular as a consultant.

He possessed a personality which was characterized by dignity, honesty and straightforwardness, and all who came in contact with him were impressed with his Christian character and kindly disposition.

No member of the profession was dearer to his professional brethren, no one was more loyal to their interests than Dr. Agnew, who lived and died possessing their universal respect and admiration.

Twice in life we are proud of our years—in early youth and extreme age.

BOOK REVIEWS.

TRAITÉ DE MÉDECINE: *Publié sous la direction de* Mm. Charcot, Bouchard *et* Brissaud. *T. 1, Paris. G. Masson, 1891.*

The first volume of the Treatise on Medicine published under the gereral direction of Professors Charcot and Bouchard, and edited by Professor Brissaud, includes the infectious diseases, the natural history of the microbes, and their relations to disease, prophylaxis and treatment.

We hardly have realized yet, so rapidly has the microbian theory grown to be part of our mental equipment, a thing assumed and accepted, how recent its beginnings are, until such a work as this imposing volume reminds us of it and recalls how it was only yesterday, so to speak, that we discussed and doubted, while to-day the world of science has accepted it in its general outlines, and but waits while the empty spaces are filled in hour by hour with the details.

The historical review with which M. Charcot opens the Treatise shows how the seed was planted when Pasteur, in 1857, submitted his memoir on lactic fermentation to the Academie des Sciences of Paris, completing the demonstration for which the work of Billing and Liebig had prepared the ground.

In the paper the great French student announced clearly the principle of the action of ferments: "Fermentation is the correlation of the life, of the organization of the cells, not of their death or putrefaction," and at the same time created the method of successive cultures which allows us to isolate, to evolve these microscopic creatures in inert media. Chauveau, ten years after, studying vaccinia, variola and sheep-pox, found that their active principles were the corpuscular elements which remained on his filters, not the liquid which passed them, and predicted the course which the work of the future would take. Then followed Pasteur's discoveries in anthrax, and the studies of Koch and Klein. It is within the last five years that a partial distinction has been established between toxic and vaccinating substances, a distinction to-day sufficiently firmly settled.

The life history in general of the microbe is next taken up, and this is followed by a remarkably clear and interesting chapter on the etiology of bacterial diseases, including the homes of the germs in the earth, air, and water, in different fluids, animals and vegetables, and how they penetrate the human economy, reviewing in turn the modes of contagion and inoculation, the virulence of

secretions and excretions, the shares taken by food, drink, environment, heredity, age, sex, race, temperament, cold, heat, occupation, auto-intoxication and secondary infection.

Next the author proceeds to the symptoms of infection, the mechanism, the general pathological anatomy, and the manner of recovery or death.

While every portion of the immense field suggested by this synopsis could not possibly be covered in a single chapter, since almost any one of the subjects might well claim a volume, yet nothing has been slighted, and still more noticeable is the constancy with which the authors have kept before them the central principle announced in the preface—"Begin wherever you can from the clinic, but return always to the clinic"—a principle not always kept before the bacteriologist.

Where the facts are well recognized they are stated succinctly, perhaps the chief authorities are given (with a slight preference, naturally enough, in favor of the French ones), their experiments and the reasoning from them briefly detailed—and the application to clinical uses and studies at once made. If the matter is too uncertain to be of clinical service, or altogether doubtful, as for instance the counter-influence attributed to bacterium termo in tubercular disease, it is dismissed with the shortest mention. A part worth the study of the "practical man" who despises laboratory work is that on immunity from infection, natural, as in the resistance of the carnivora to tubercular disease, or acquired, as in the process of vaccination. No intelligent thoughtful man could read it, whatever his views of "pure science" and not see how vast the field it opens, how entirely practical the conclusions, and how stimulating to the scientific imagination the vista of future possibilities.

The first division of the book ends with a summary of the general indications for treatment in disease of bacterial origin, which the studies of the modes of entrance, life, action and death or removal of the microbe suggests: "In the course of bacterial affections it is necessary to act upon the *kidney*, which eliminates germs and toxic principles; *diuresis* is of service in this direction, as the study of the urinary crisis proves. It is necessary to act upon the *liver*, which destroys, retains or transforms part of the poisons. To this end we must strive against *hyperpyrexia*, because among other evils, suppressing or lessening the glycogen of the hepatic gland, it thereby annuls the functions of this organ. *Nourishment*, even excessive feeding will favor this action of the liver-cell and will give to the organism new energy for the struggle against the parasites, and resistance to their attacks * * * * * *Oxygen* aids combustion: the more certain toxic principles are oxidized, the less harmful they become. *Pure air*, frequently renewed and the various nervous stimulants should be used to sustain and excite the forces of the patient. Its good influence upon tuberculous sufferers is well known."

Nutriment in the diatheses and in disease is next treated, and obesity is considered at some length, with a discreet review of the numerous "cures," ending with this Gallic conclusion—"The obese patients from whom the readiest evidence to our prescriptions is obtained * * are * * * * women whose personal attractiveness is at stake, above all a widow desirous of still charming."

The article on diabetes has a particularly good history of the innumerable drugs at various times recommended in this affection, but some for good reasons not of service, some of unaccountable usefulness. They make a much longer list than the twenty-seven theories of the cause and mechanism of diabetes, which, in 1880, Bouchard stated had been put forth up to that date. Several have been born since. The paper on gout which follows contains no new matter, and is little more than a "précis" of the classical English works on a subject which the English have made peculiarly their own.

In the next section one looks with interest for the newest thought and discovery since its subject "infectious diseases common to man and animals" includes the three maladies, anthrax, glanders, and rabies, from which the science of bacteriology has learned most of its lessons. M. Roger has accordingly given a large share of his attention to these, which may be called the prototypes of the maladies which we bear in common with the beasts, but our debt to the comparative pathology of tetanus and tuberculosis is scarcely less, and these are studied at length too, although the author, holding only to demonstrated facts, concludes that but five affections are contracted purely from animals—vaccinia, anthrax, glanders, rabies, and trichinosis. Others are produced in man and animal by the same pathogenic agent, but contagion, while it may occur, is not a necessity. Such, among others, are tuberculosis, tetanus, and actinomycosis. A separate section is given to typhoid fever, and then come the infectious diseases whose pathogenic agents have either not been isolated like grippe and dengue, or not proven, like mala-

rial fever and yellow fever. M. Roger gives in detail the successive steps in the recognition of the bacillus anthracis from Rayer's description, in 1850, of "small filiform bodies in the blood [in anthrax] of about double the length of a red corpuscle," through the work of Delafond, Davaine, and others, to its completion by Koch and Pasteur in 1876–77—the first clearly proved bacterial disease. The rest of the story every one knows, and knows too that we have not learned much from all this labor—the relative proportions are not unfairly shown in the distribution of matter in the article—thirty-eight pages of history and pathology, two pages of treatment. It would be unjust not to add that we have gained a much more important knowledge—that of prevention.

Perhaps to this country the practical value of the next subject, glanders, is greater than that of the studies of anthrax, for while the latter is an exceptional disease on this continent, the former is unhappily common in its equine form—so common that probably a veterinarian in active practice in Philadelphia could point out a dozen cases any day. Considering its easy experimental transmissibility, it is curious that the clinician sees it so rarely in the human subject. But its frequency and virulence among horses is enough to render its study of the greatest economic importance. M. Roger does not display quite the same fairness here which we noted above, for he speaks as if the final discovery of the bacillus of glanders were due to his countrymen, Bouchard, Charrin, and Capitan, though the credit incontestably belongs to Loeffler and Schutz, and it is to the former of these that we owe the greater part of our knowledge of the whole history of this bacillus.

The difficulty of diagnosis is strongly insisted upon, but scarcely enough stress is laid on the ease of proof by test-inoculations producing characteristic lesions, notably a peculiar orchitis in guinea-pigs. It would be well could our own state lay to heart the strong expressions of the writer on the prophylaxis and sanitary policing of the disease, since we are really without a law on the subject.

Rabies is a disease in whose study the French have an incontested pre-eminence. The article on it here has made good use of the vast material offered by the Pasteur Institute. The first human patient whom Pasteur treated was a lad, Joseph Meister, who had received so many and such severe bites that his death seemed certain. At the time of writing, six years after the inoculation, his health was still perfect. The utility of the treatment has since been demonstrated in more than 8,000 patients treated at Paris, a number which may be doubled by adding those treated at the Pasteur Institutes of other countries.

In tuberculosis, too, a large share of the honor must fall to French observers, for although the extraordinary completeness of Koch's work is shown by the fact that no important addition has been made to his statements published in 1882 and 1884, it was Laennec who earliest insisted upon the "unity of phthisis," a theory to which Virchow and Niemeyer opposed all the force of their convictions and teaching.

A conservative opinion of a very moderate kind is expressed as to the possible value of "tuberculin":—"Its application to man was made in too hasty a fashion. It must go back to the laboratory from which it should never have emerged. But while they must still remain in the field of experiment, the importance of Koch's researches cannot be denied: the curious properties of the lymph, its action upon the tubercles, the changes which it brings about in their surroundings, are all facts of great interest."

Professor Chantemesse has made a singularly interesting contribution to the volume in his article on typhoid fever. The definition with which it opens may be quoted, both to show how far from the cut-and-dried style of the text-book is the author's manner of treating his subject, and as an example of the modern attitude from which the whole matter is regarded:—"Typhoid fever is a general disease, the result of the reaction of the economy against the invasion of the typhoid bacillus. This definition rests upon the symptoms and ætiology. It leaves out of the question the pathological anatomy; the intestinal lesion is not the characteristic of the disease; and it implies the idea of generalized infection. A local change, even though the result of the typhoid bacillus, is not sufficient to constitute typhoid fever."

M. Chantemesse mentions the paper of our townsman, Gerhard, as one of the earliest contributions to the separate history of typhoid, confused with the other continued fevers until the clear descriptions of Louis, whose pupil Gerhard had been, but he does not say that this study (*American Jour. of the Medical Sciences*, 1837) was the *first* in any language in which the distinctive differences were fully and sharply made out.

So much of value is contained in the article that it is difficult to select anything to quote. The importance of the studies of the

bacillus which have demonstrated its amazing vitality cannot be overestimated. It flourishes damp or dry, warm or frozen, with or without oxygen, above or below ground, and sunlight and acids appear to be almost the only things which it finds inimical—a hint for treatment. It has been found in the course of the disease in nearly every organ and tissue of the body, and indeed it is probably to its very constant presence in the lungs that the frequency of pulmonary symptoms, bronchitis, congestion, and pneumonia, in the course of the fever is due.

Numerous experiments show that a typhoid case may spread infection by fæcal matters, by the urine, especially if albuminous, and by the sputa. From these facts the means of prophylaxis are deducible.

The influence of drinking-water in the propagation is discussed at length, and many conclusive instances are cited, none more remarkable than the history of the Plymouth epidemic in Pennsylvania. Complete demonstrations are occasionally made by the periodic epidemics which in Paris always follow when for any cause the Seine water has been used for the public supply. This species of "vivisection" of human beings on a vast scale we are familiar with in our own city, and the tax we pay for the knowledge runs annually to a sum of thousands of cases and hundreds of deaths. A valuable practical point is given in disinfection. Richard and Chantemesse repeated with similar results the experiments of Laborius and Pfühl on the value of milk of lime as a disinfectant. "Milk of lime" made with slacked lime in 20-100 solution proved superior to 1-1000 sublimate and to chloride of lime, absolutely putting an end to the growth and life of the bacilli in a few minutes. It possesses the advantage of a nominal price, of being harmless, and of being useful in small quantity, namely, 2 parts to 100 of the fæces or fluids.

The hydropathic therapy of Brand is advised or Bouchard's modifications, which consist in gradually lowering the bath temperature, the routine use of a purgative every third day, and intestinal antisepsis by naphthol and salicylate of bismuth.

The report of the director of the Council of Health is quoted as saying that Brand's treatment "gives a regiment to Germany every three years."

Space fails to consider the remaining articles on influenza, malarial fever, cholera, and yellow fever.

The Frenchman has the art of expressing himself with grace and ease, and none of the authors fail in this respect to reach the national standard. A clear and flowing style is a grace all too uncommon in medical work, but here this excellence combines with simplicity of statement to render the treatise most agreeable reading. A vast amount of information and study, scattered in a thousand journals and pamphlets, has been carefully brought together, and sifted to its useful elements, all views getting a fair representation, while the several distinguished authors add to their values by their own comments and opinions.

Five volumes more are promised at short intervals. It is to be hoped and expected that they will be as good as the first.

LITERARY NOTES.

THE COSMOPOLITAN FOR APRIL.

With the April number, the *Cosmopolitan* completes its twelfth volume in a manner worthy the wide and growing popularity of this magazine. The *Cosmopolitan* is the most superbly illustrated of the monthlies and the pictorial embellishment of the April number is rather above the average. The leading article is on "Genoa—the home of Columbus" written by Murat Halstead who recently visited the city, and illustrated from photographs of all the principal relics of the great navigator which remain in Genoa. "A romance of old shoes," by Miss Elsie Anderson de Wolfe, exhibits the best of the remarkable historical collection at Cluny. "Torpedoes in Coast Defence" is the title of a timely paper by Lieut. A. M. D'Armit of the U. S. Army with photographs and drawings by J. O. Davidson. Wallace Wood treats of "Homes of the Renaissance" in an illustrated paper, and William H. Rideing, is the author of a delightfully written and profusely illustrated article on "The Crew of a Transatlantic Liner." "The Marriage of American Women to German Noblemen" is discussed by Elizabeth Von Wedel, an American who is now the wife of a titled subject of the Kaiser. Other papers are "The Theatre of To-day" by Cora Maynard; "Two Englishmen of Letters," by Brander Matthews; "All Sorts of Conditions of Men" by Edward Everett Hale; "A Living Opal" by Ernest Ingersoll, and "Count Leon Tolstoi," a description of the family life of the great Russian novelist and reformer by a friend of his family. Beside all these attractions the April *Cosmopolitan* is rich in fiction and poetry. "The Rancho of Heavenly Rest" is a vigorous sketch of the southwest, full of action and local color.

Its writer is Forbes Heermans, the author of "Thirteen" and more stories. The illustrations are by Irving R. Wiles. "Princess Ratazánoff" by Cassimer M. Podgorski, is a characteristic tale of Russian Court life in the days of the Czar Paul I. Frederic Remington has illustrated delightfully "The Rustic Dance," a poem by Irving Bacheller, and other verses have been written for this number by George Macdonald, Katherine Lee Bates, Charlotte L. Seaver and Sarah M. B. Platt.

THE LITERARY EDITOR.

The book-reviewer on the staff of a daily newspaper is commonly known as its literary editor, though, as a matter of fact, he is seldom a literary person. Moreover, his duties are determined by the character of the organ he serves: it seems to be worth the while of comparatively few journals in the United States to employ a competent critic solely for the purpose of telling its readers about the contents of new books. In most cases this function is performed perfunctorily by the musical or dramatic editor, who, in turn, is simply an industrious, enthusiastic, or overworked member of the writing force,—perhaps a writer of "editorials," perhaps not. At all events, it is folly to designate him as a literary editor or as a book-reviewer; he edits nothing; he is first and last a drudge, capable, perhaps, of something better than hack-work, but productive of that alone. Then there are first-class journals which send out some of the more important books for review to special writers, and dispose of the great body of new publications in brief paragraphs,—vastly to the disgust of the publishers and authors. Or the various members of the staff are periodically taxed for lengthy notices of the larger works, and the remainder is comprehensively condemned in a sporadic half column or so of "literary notes" by the exchange editor. Finally there is a small group of journals which have found it to their interest or profit to make a "feature" of adequate book-reviews, edited and for the most part written by a single "literary editor." He may, to be sure, do other things,—pass upon contributed verse or manuscript of a general literary character, select the miscellany from magazines, help in the make-up of the Sunday supplement, write the obituaries of distinguished authors, and contribute a fixed or irregular quantity of "editorials" during the week; but these odds and ends are quite by the way; he is first and foremost a reviewer of new books.

The life of such a one, if he would have it so, is the most tranquil in journalism. He will do a large part, and it will be the better part, of his work at home. At the office, only the occasional visit of a passionate poet, manuscript in hand, or of a nervous author eager to indicate the particular merits of his printed work, will disturb the reviewer's communication with current literature. His professional adventures are of the mildest sort.—*Melville Phillips, in April Lippincott's.*

PERISCOPE.

THERAPEUTICS.

THE INDICATIONS FOR QUININE.

Manquat (*Lyon Méd.*, October 25th, 1891) gives a summary of the indications for quinine. In *malaria* it is efficacious in all types, besides being a preventive. Laveran showed that malarial microbes disappear from the blood after quinine has been taken for a certain time, and that the addition of a minute quantity of a weak solution to malarial blood destroys them. He considers the white blood corpuscles are not directly influenced, but enabled more easily to subdue and seize upon the micro-organisms rendered dead or moribund by the drug. If given during or just before the onset of an attack, quinine has no power to check it, while this may be prevented if taken at a sufficient interval beforehand. Baccelli made intravenous injections of 1 g. during the onset, but during the first six hours could recognize no modification in form, number or movement of the microbes. As the largest part of a given dose of quinine is eliminated during the sixth hour after injection, while according to Laveran it is during the onset that the microbes are present in the blood in greatest number, the drug should be given at an interval of about six hours before an expected attack. Quinine should be taken eight hours before shivering appears in quotidian ague, twelve hours before in tertian, and from eighteen to twenty-fours hours beforehand in the quartan variety. To these figures, however, another hour should be added; half an hour on account of the tendency of the onset of successive attacks to be antedated to that extent, and half an hour as allowance for imperfect absorption from impaired gastric action. For the last reason also, and to obviate its rejection, the required quantity should be given in two or three divided doses at half-hour intervals. Two

doses, eight to ten hours before the expected onset of shivering, are almost always effectual. If the result be unsatisfactory, an aperient should be given. Laveran states that no microbes are found in the blood of malarial patients after sulphate of quinine has been taken for eight days in doses of 0.6 to 0.8 g.; but that if after three or four doses it be discontinued, the microbes reappear, and a relapse occurs. Upon this is based his scheme of treatment, namely: During the first three days, 0.8 to 1 g. of hydrochlorate of quinine daily. No quinine during the fourth, fifth, sixth and seventh days. On the eighth, ninth and tenth days, 0.6 to 0.8 g. None from the eleventh to the fourteenth day. On the fifteenth and sixteenth days, 0.6 to 0.8 g. None from the seventeenth to the twentieth day. On the twenty-first and twenty-second days, 0.6 to 0.8 g. In very severe cases recourse should be had to hypodermic or intravenous injection, or injection into the respiratory tract. A gramme of a salt of quinine may be injected subcutaneously, and repeated after a short interval; as a rule, 1½ to 2 g. are sufficient. The injection should be made into the deep subcutaneous tissue to avoid complications. The following formula may be used: ℞ Quin. sulph. 1 g., acid. tart. 0.5 g., aq. destill. 10 g. The addition of a little antipyrin greatly enhances the solubility; 1 g. quin. hydrochlor., with 0.5 g. antipyrin will dissolve in 2 g. of water. When with severe depression there is reason to believe no absorption has taken place, the solution may be injected into the trachea through the crico-thyroid membrane. Baccelli recommends intravenous injection as the most prompt and efficacious method in very grave cases (quin. hydrochlor. 1 g., sodii chlor. 0.75 g., aq. destill. 10 g.). The solution should be injected very slowly into one of the small venous branches at the bend of the arm. In continued malarial fevers quinine must be given in larger doses. Laveran advises 1.5 to 2 g. daily (0.6 morning, 0.8 evening), till fever disappears. This nearly always happens by the second or third day. If fever persists with four days' treatment, it may be assumed to be non-mlarial. When the temperature falls, 0.6 to 0.8 g. should be given daily for a short time. In malarial cachexia quinine wine may be taken with meals, but not fasting, or long before food, otherwise gastralgia and dyspepsia ensue. As a preventive, quinine is not effective in smaller doses than 0.25 to 0.30 g. It should be given also in all malarial complications and incidental affections (for example, neuralgia, hæmorrhage, pneumonia). In *typhoid fever* Jaccoud and others restrict its use to certain conditions, namely, non-remission of fever, or very slight morning remission; an uninterrupted series of evening temperatures over 104°; cardiac failure. In *pyœmia* quinine in large doses (1 to 2 g.) is the only remedy which has been in some measure successful; but as it has often failed when given alone, a definite conclusion as to its value cannot yet be drawn. In *acute articular rheumatism* it has been frequently given with success, but is of much less efficacy than the salicylates or antipyrin. In *Ménière's disease* quinine has been given with some success in daily doses of 0.6 to 0.8 g. for one or two weeks, followed by discontinuance for an equal period, and then by renewal of similar treatment. The first doses appear to cause exacerbation of the symptoms, and must be continued for some time before improvement occurs. In *blennorrhagia*, tepid 1 per cent. injections of sulphate of quinine have proved of marked success. Rapid improvement began from the first, and continued till the fifth day, when as a rule only a drop of cloudy discharge appeared. Complete recovery did not, however, ensue for some little time (quin. sulph. 1 g., bism. subnit. 5 g., mucilag. 10 g., glycer. 30 g., aq. destill. cal. 120 g.—Jullien). Regarding the mode of administration of quinine generally, the sulphate, though most often used, is less suitable than the hydrochlorate, which is more soluble, contains more quinia, and is less subject to mould. A solution of 1 in 20 is very useful, but very bitter. On account of this, and its concentration, it is well to prescribe half a tumbler of some drink afterwards; coffee is a good menstruum. For rectal injection, the desired quantity of quinine should be dissolved in 100 to 120 g. of tepid water. If opium is not contra-indicated, the addition of 10 g. of laudanum is useful. The injection should be preceded by a simple enema.—*Brit. Med. Jour.*

TREATMENT OF TYPHOID FEVER.

Dr. Smakowsky (*Ugskrift for Lœger*, Nos. 34–35, 1891), in a hospital practice of some 700 cases of typhoid fever, has had opportunity to try all kinds of treatment. He has found Prof. Sacharjin's method of treating the disease with divided doses of calomel the most efficacious. One-half centigramme (one-tenth grain) of calomel, mixed with sugar, is given every hour until copious purgation takes place. Frequent gargling with chlorate of potash will prevent the appearance of stomatitis. In cases where there are already

signs of heart-weakness an infusion of digitalis may precede the calomel treatment. If this treatment be instituted during the first week of the disease one will seldom fail to cut it short, even where it appears with violent symptoms. If it fails in this, the course of the disease will be shorter and the complications milder. This treatment may be repeated, for the second course will sometimes show an improvement which the first will not. In those cases which are not aborted the writer advises the use of the following powder:

℞ Bismuthi subnitrate.....dgm. 10 (grs. jss).
Naphthalin.....cgm. 20 (gr. ⅓).
Quiniæ sulphat.....dmg. 10 (grs. jss).

Sufficient for one powder. One powder four times a day.

If lung symptoms be present he prescribes:

℞ Spirit. ammoniacat. anisat...gms. 4 (fl. 5j).
Tinct. eucalypti.....gms 30 (fl. ℥j).
Tinct. menthæ pip.....gtts. x.

Ten drops every second hour.

This is an excellent disinfectant for the mouth. If this method can be instituted before the tenth day, the patients are not weak and debilitated individuals, and where there are no very severe complications the mortality will be exceedingly small. He has observed fourteen cases where the disease was aborted immediately after its beginning by the calomel treatment. He has also found treatment by calomel of service in recurrent and petechial typhoid.—*Cinn. Lancet-Clinic.*

TREATMENT OF EPILEPSY BY THE CONJOINED EMPLOYMENT OF BROMIDE OF POTASSIUM AND OF AN AGENT CAPABLE OF RENDERING THE NERVOUS CENTRES ANÆMIC.

Under this head Poulet, of Planche-les-Mines, writes of a combination of bromide of potassium with calabar bean (*vide Medical Times*, vol. v., p. 610), which has given him success in the treatment of obstinate cases of epilepsy, where the bromides alone had failed. Dose: One tablespoonful, to be increased to a tablespoonful and a half, then two tablespoonfuls, daily. A tablespoonful contains about 57 grains of bromide and about 16 minims of the tincture. The medicine may be given in divided doses instead of one full dose, half a teaspoonful being given at first twice, then three times, then four times daily. The bromides remain the sheet anchor in epilepsy; and by the term "bromides" we have especial reference to the bromide of potassium, which alone is truly efficacious. There are, however, a great many epileptics whose attacks are only mitigated or postponed, not completely suppressed, by bromide of potassium, and in such cases, if we associate the bromide with some agent that possesses properties identical with those of the bromide (that is, being capable of anæmiating and decongesting the nerve centres and paralyzing the system of voluntary muscles), we generally obtain results which are perfectly satisfactory in essential epilepsy, and even in partial, or Jacksonian, epilepsy, on condition that, in the latter, we begin by the specific treatment of the determining cause. The substances that have been most successful are calabar bean, picrotoxine, and belladonna. In cardiac epilepsy digitalis must be added. We may indifferently substitute sulphate of eserine for the preparations of calabar bean, sulphate of atropine for those of belladonna, and digitaline for digitalis.—*American Journal of Medical Science*, September, 1891.

MEDICINE.

ALBUMINURIA IN SYPHILIS.

At a meeting of the Russian Syphilidological Society, Dr. Oscar V. Petersen, of St. Petersburg (*Vratch*, No. 21, 1891, p. 511) stated that, while conducting an inquiry into visceral syphilis (*ibid.*, No. 32, 1887), he was struck with the fact (1) that of 88 necropsies of syphilitic bodies, in 34 renal lesions were present; and (2) that of 36 cases in which the fatal issue had been caused by syphilis itself, in 7 the patients had succumbed mainly to chronic nephritis. In view of figures he undertook a systematic examination of the urine in 200 consecutive cases of syphilis, all of which were treated by intramuscular injections of salicylate of mercury, from 0.1 to 0.13 g. once weekly. The urine was examined—invariably after two methods: boiling and nitric acid, and after Esbach's rules—once after the patient's admission and subsequently once every week, usually on the next day after the mercurial injection. The grand total of the analyses amounted to 1,141, of which 436 referred to 78 patients with recent syphilis; 615 to 103 with secondary lesions; and 90 to 19 with late manifestations. In 55 (27.5 per cent.) albuminuria was found; of these, 28 (35.9 per cent.) belonged to the first category; 22 (21.3 per cent.) to the second; and 5 (26.3 per cent.) to the third. Of the 55 cases, in 28 a spurious albuminuria—that is, depending on an accidental admixture of proteids in patients with purulent balanitis, gonorrhœa, prostatitis, etc.—was present, occurring in 18 patients with recent syphilis, seven with secondary, and three with late disease; in 19 (6.8 per cent.)

a transitory one, affecting seven patients of the first group, 11 of the second, and one of the third; and in seven (4.2 per cent.) a genuine permanent or "syphilitic" albuminuria (in three recent cases, four secondary cases, one late). Dr. Petersen's conclusions may be summarized as follows: (1) In all syphilitic cases admitted to hospital the urine should be examined immediately after admission; (2) a genuine albuminuria should be strictly differentiated from a transitory or a spurious variety; (3) syphilitic albuminuria occurs in about 3.8 per cent. of patients with recent syphilis, 3.8 of those with secondary symtoms, and 5.8 of those with late manifestations; (4) in syphilitic patients with nephritis, a mercurial treatment readily gives rise to lesions of the gums, hence whenever sponginess of the gums appears in a syphilitic patient the urine should immediately be examined; (5) the salicylate treatment may sometimes produce transitory albuminuria; such cases, however, are very rare, and the symptoms soon disappear; (6) the elimination of mercury by the kidneys never causes a genuine albuminuria, and generally does not irritate the organs; (7) on the contrary, syphilitic albuminuria is rapidly cured by the use of mercurials.—*Brit. Med. Jour.*

BILATERAL PARALYSIS OF THE SIXTH NERVE.

The minute study of the nerves of the eye has been shown to be of importance from its bearing on the knowledge of the diseases of the central nervous system, and from this point of view at least the rare condition of bilateral paralysis of the external recti muscles of the eye deserves attention. In the large *clinique* of Landolt, M. Dufour has found three examples. In the first case (*A*) a man, aged fifty, had felt the annoyance of diplopia for some time. After careful examination it was found that the only abnormality of the muscles of the eye was a paralysis of the external rectus on both sides, which led to a convergent strabismus of about 35°. In general health he complained only of a want of energy; but it was noticed that both his pupils were very small and reacted very little to light though well to accommodation. The knee-jerks were normal, but he found it difficult to stand with his eyes shut. In the second case (*B*), a woman of fifty-four, Landolt had observed, twelve years before, a paralysis of the third nerve on the left side, which lasted some time; and again, a year later, a paralysis of both the sixth nerves which was only temporary. The same bilateral paralysis reoccurred again after nine years, and this time had lasted apparently unchanged for two years. The retinæ were normal, the pupils insensible to light and acting very little to accommodation. The third case (*C*), a man aged thirty-eight, had a history of good health in all important points. Two years before he had some diplopia for a short time; at present he was suffering from a more serious attack, and had convergent strabismus of 25°. There was paresis of the external recti of both eyes. Vision was good, and the ophthalmoscope showed no abnormality. His general health was poor, and his legs were weak. There was no knee-jerk on either side, and he could not stand with his eyes shut when his heels were brought together. In these three cases the conclusion to which the bilateral paralysis of the sixth nerves points is that there was a central lesion brought about by some chronic cerebro-spinal disease, such as locomotor ataxy. Duchenne had remarked that in the earlier stages of locomotor ataxy some paralyses of the muscles of the eye occurred which were only temporary; and this agreed with the previous history of two of these cases.—*Le Progrès Méd.*, p. 171, September 5, 1891.

DIAGNOSIS OF BLADDER TUMORS.

Dr. Guiard points out some features of hæmaturia which may aid in establishing the diagnosis without digital examination or exploratory incision. Prostatic tumors are scarcely ever accompanied by hæmaturia; renal tumors very generally are. Renal hæmorrhage is quite often only of short duration, small in amount, and recurs at long intervals. At times there is an alternation of clear and bloody urine in the same day, a condition never seen in hæmorrhage due to tumors in the bladder. Renal hæmorrhage gradually diminishes and finally disappears. The opposite is seen in bladder tumors. In washing out the bladder if the last drops consist of pure bright blood, it speaks for tumor of the bladder. Elongated clots, rarely found, are probably formed in the ureter, especially if pains like renal colic have preceded their discovery. Small blood cylinders may be casts of the efferent kidney tubes. Hypogastric palpation alone usually shows nothing, but after the bladder has been emptied Guyon's method of *ballottement* shows the smallest increase in the size of the bladder. By pressing the anterior hand deeply with successive expirations, the extent and thickness of a bladder tumor can be appreciated.—*Archives Générale de Médecine*, October, 1891.

A RARE PARASITE.

With reference to the records of distoma crassum which have been published, we find, on consulting the pamphlet in which Dr. Sinclair published his paper, that the statements there made is that "distoma crassum or Sinense with anchylostoma were present in one case." It would be interesting if Dr. Jacob would describe the specimen, which we understand is now in the Museum of the Leeds Medical School, or state positively which species of distoma, whether crassum or Sinense, Dr. Sinclair alludes to, so that the case may be recorded as an additional instance of the occurrence of one or other of these parasites.—*Brit. Med. Jour.*

ANGINA PECTORIS.

Dr. R. Douglas Powell believes angina pectoris to be the expression of a disturbed innervation of the heart or the vessels associated with more or less intense cardiac distress and pain, and a general prostration of the forces, always producing anxiety and often amounting to a sense of impending death. Considerable stress on habitual high arterial tension as a factor in causation. The affection is not necessarily associated with coronary or other disease of the heart or vessels, although in fatal cases, disease or obstruction of the coronary arteries is the most frequent lesion found, after which, in order of frequency, come fatty degeneration, aortic dilatation, aortic regurgitation, and aneurism. The varieties of the affection are classified as follows: (1.) In its purer forms we observe disturbed innervation of the systemic or pulmonary vessels, causing their spasmodic contraction, and consequently a sudden extra demand on the propelling power of the heart, violent palpitations, or more or less cramp or paralysis ensuing, according to the reserve power and the integrity of that organ.—*Angina pectoris vasomotoria.* (2.) In other cases we have essentially the same mechanism, but with extra demand upon a *diseased* heart.—*Angina pectoris gravior.* (3.) The trouble may commence at the heart through irritation or excitation of the cardiac nerves, or from sudden accession of anemia by the cardiac muscle from coronary disease.—*Primary cardiac angina.* (4.) In certain conditions the blood (often gout), or under certain reflex excitations of the inhibitory nerves always, however, with a degenerate feeble heart in the back-ground. We may observe intermittence in its action prolonged to syncope.—*Syncopal angina.*

Regarding treatment.—In group 1, nitrite of amyl, and still more nitro-glycerine are of great value, and may be combined with nervine tonics or sedatives, iron, zinc, valerian, bromides, etc. In groups 2 and 3, carminative stimulants, or digitalis with nitro-glycerine, are recommended, and of all tonics, arsenic, as a rule, is the best.—*American Journal of Medical Science.*

NEUROSES AND NEURO-PSYCHOSES AFTER TRAUMA.

Dr. Schultze presents the following conclusions on this subject: 1. There are various psychoses and neuroses which may be caused by a traumatism, but not a definite disease to which the name, traumatic neuroses, is applicable. 2. The symptoms regarded by Oppenheim as pathognomonic of traumatic neuroses, viz., (*a*) concentric contraction of the visual field for white and for colors, and (*b*) partial or diffuse anæsthesias, are absent in many cases of functional disease after trauma and are not characteristic. 3. The traumatic neuroses are not of rare occurrence, and when developed after trivial injuries are apt to be the result of simulation and aggravation. 4. Positive objective criteria for determining the existence of, or non-existence of simulation are not at present in our possession.—*Volkmann's Vortrage.*

ANÆMIA AND HYPERÆMIA OF THE BRAIN IN THEIR RELATION TO EPILEPSY.

Z. Gutnikow (*Pflüger's Archiv,* xlix, p. 609) has made some experiments on this subject in animals. If an animal be fixed in a radiate direction upon a centrifugal apparatus, according to Salathé, when the head of the animal is at the periphery, on rotating the apparatus hyperæmia of the brain intervenes, but when the head is at the centre and the legs directed towards the periphery of the disc of the apparatus, anæmia of the brain occurs, and in the latter case the animals die more rapidly. Gutnikow, in repeating these experiments, comes to an opposite conclusion. In the case of guinea-pigs rotated on a centrifugal apparatus, he finds that when the head of the animal is directed towards the periphery of the disc, there is cerebral anæmia, and in the opposite case hyperæmia; but this occurred only in animals which survived. Dead guinea-pigs exhibit the phenomena described by Salathé. In the latter case centrifugal force effects its usual action, but in living animals the influence of the vasomotor centre opposes and

even overcomes the action of the centrifugal force. It is well known that excision of a portion of the sciatic nerve in guinea-pigs may be followed by epileptic seizures under certain conditions. In animals already suffering from epilepsy, when they are placed on a centrifugal apparatus and rotated, the epileptic attacks are increased when the head is placed towards the periphery. If the animals were not subject to epileptic attacks then rotation induced such attacks.—*Brit. Med. Jour.*

A CASE OF CHOLEDOCHOTOMY.

Prof. E. Küster reports a case of gall obstruction and jaundice in a woman 48 years old. She had suffered for two years and had been already icteric for months. Küster, from the symptoms, diagnosticated presence of stone in the common duct. The operation showed this diagnosis to be true. He found the gall bladder shrunken, the common duct very much dilated and containing several stones. The common duct was incised and several calculi removed. The wound was closed by a double row of sutures and tamponed with iodoform gauze. With the exception of considerable secondary hæmorrhage the recovery was complete. This is not the first case. Another case is reported by Kümmel; yet another by Courvoisier, in all five cases, so that we have six cases with one death and five recoveries. The application of this operation is entirely circumscribed. The cholecystenterotomy of Winiwarter will not be entirely replaced by this operation. Rehn, of Frankfort-on-Main, had, in a similar case to that reported by Küster, extirpated the gall bladder, after which he found several biliary calculi in the common duct, which he removed by incision. Sutures-recovery. Braun, of Konighberg, reported a case in which he, after separating the adhesions and fixed the shrunken gall bladder against the duodenum, discovered a large sized biliary calculus in the common duct, which by means of incision was removed. The wound was closed by four sutures, tamponed by iodoform gauze, and an uncomplicated recovery ensued. After seven days bile appeared in the intestinal canal.

PROFUSE PURULENT EXPECTORATION.

℞

Ammoniac	grs. 112½.
Aceti. scillæ	gtt s. 225.
Aquæ fœniculi fl	ʒ 6.
Ext. glycyrrhizæ pur	gr. 150.

M. Sig. Teaspoonful every half hour.

—*Med. Brief.*

SURGERY.

ACUTE GONORRHŒAL CYSTITIS.

Dr. Wickham recommends oil of sandalwood in acute cystitis of blennorrhœal origin, giving sixteen capsules in the twenty-four hours, each containing about six drops (forty ctgr.) of the fluid. This also has a very beneficial action on hæmaturia. Other balsamics have been found only to irritate and aggravate the symptoms in gonorrhœal cystitis. The action upon the mucous membrane of the stomach is a stimulating one, which permits of suitable diet. Horteloup is given credit for the method, which usually renders instillations of nitrate of silver uncalled for.—*Union Médicale*, No. 145, 1891.

DISEASE OF THE BRAIN FOLLOWING A SIMPLE NASAL OPERATION.

The *Journal of Laryngology, Rhinology, and Otology* gives an abstract of an account of an unfortunate accident described by Wagner in the *Münchener medicinische Wochenschrift.* The author performed a galvano-cauterization of the left turbinated body in a patient twenty years of age, on account of headache. There was no special pain and there was no bleeding. The next day the patient had a severe headache, and on the third day there was hæmorrhage from both nasal cavities. This was treated first with ice water, then by tamponing the anterior and posterior nares. In the evening the patient became feverish, and Cheyne-Stokes respiration appeared. The tampons were removed, but the temperature did not fall and the symptoms of a severe affection of the brain appeared. Seven days later death occurred. A post-mortem examination was not allowed. The author concludes that the bleeding could not have been the direct consequence of the operation, because it followed some days afterward, and because parts bled which had not been operated on. He believes that thrombosis of a sinus occurred, which disturbed the circulation in the nose. In some other published case operative treatment of the middle turbinated body was followed by meningeal disease.

SUCCESSFUL TREPHINING FOR BASAL HÆMORRHAGE.

Smart (*British Medical Journal*, No. 1614, p. 1204) has reported the case of a woman, forty-three years old, in which, following a blow upon the right parietal bone, the face became drawn to the right. There was no

ptosis, no ocular deviation; the pupils were of moderate size, nearly equal, and they re acted fairly well to light; but there was left lateral hemianopsia. Motility and sensibility were impaired upon the left side of the body. Coma, with Cheyne-Stokes respiration, developing, two trephine openings were made, one at the seat of injury, the other a little anteriorly and inferiorly. There was free hæmorrhage from the membranes, but no cause for the symptoms was found within reach of the director or finger. By exclusion, the original diagnosis of a right basal lesion appeared to be confirmed. At once, when the dura was incised, the breathing improved, the relief of the pressure and tension being indicated by the occurrence of cerebral hernia. Subsequent improvement was progressive, the hemiplegic symptoms in some degree, however, persisting. A year after the accident there had been no relapse.

OPERATIVE TREATMENT OF HIP DISEASE.

Ferria (*Centralbl f. Chir.*, No. 6, 1892) describes a method of treating tuberculous disease of the hip which has recently been practised by Caponotto, of Turin, with good results. In the treatment of tuberculosis of this joint by injections of iodoform, the conditions are not so favorable as in disease of some other joints, particularly the knee and wrist. It is not always easy to puncture the hip, and the anatomical conditions of this joint prevent sufficient diffusion of the injected fluid. In order to afford free access of the antituberculous agent to all parts of the diseased hip, Caponotto opens the joint and removes part of the head of the femur. This is done by making an incision about three inches in length, carried from the top of the great trochanter towards the postero-inferior spine of the ilium, and by cutting through the muscles and the capsule on to the head of the femur, about two-thirds of which he then removes with hammer and chisel, whether the bone be diseased or healthy. Sufficient space is thus established between the opposed bones of the joint to permit of removal of diseased synovial membrane, and also of any sequestra or tuberculous deposits in osseous structure, and of subsequent distension of the whole of the diseased articular cavity by injected fluid. After this cavity has been filled with freshly prepared iodoform emulsion, the soft parts are brought together by sutures, and the limb is placed in a good position, though not, unless in very exceptional cases, extended by weights.

SUCCESSFUL TREATMENT OF SUPPURATIVE PHLEBITIS OF THE INTERNAL JUGULAR VEIN AND THE LATERAL SINUS.

Parker (*Liverpool Medico-Chirurgical Journal*, No. 22, p. 44) has recorded the case of a man, twenty-five years of age, who for eleven years following an injury in the region of the left ear, presented symptoms of suppurative otitis media, with perforation of the tympanic membrane. Symptoms of suppurative phlebitis of the lateral sinus and internal jugular vein, with double optic neuritis, developing, an incision was made in the mastoid and intra-auricular regions, and the mastoid process was opened. A clot was found in the facial and jugular veins, extending into the lateral sinus, which was occupied by greenish purulent lymph. Ligatures were applied to the veins on either side of the thrombi, and the intervening portions excised. The lateral sinus was partially scraped. Hæmorrhage was controlled by a plug of antiseptic wax. The symptoms disappeared for two days after the operation; then then the temperature rose to 103°. The wax plug, with some accumulated pus, was removed from the sinus, and the mastoid cells were irrigated. For nearly a week the temperature continued to oscillate between high figures, but finally subsided, the case ultimately progressing to a favorable termination.

A CASE OF FOREIGN BODY IN THE AIR PASSAGES.

Elmer C. R., now æt. fourteen, while tacking up a lambrequin, drew one of several large brass-headed tacks which he was holding in the mouth into the trachea and into the left bronchus, as near as could be determined by external location, about one inch below the bifurcation. The patient was first seen by Dr. Dubois, who found him suffering from spasm of the glottis, dyspnœa, cyanosis, incessant coughing, and a frothy, slightly blood-tinged expectoration. After a few days the irritation passed away and the patient returned to normal health, and the accident was soon forgotten. One year later, and about six months ago, the patient first came to my personal notice. At this time the boy appeared robust and healthy, with, however, the presence of a slight irritative cough. Inspection showed the chest symmetrically developed. Auscultation gave a diminished vesicular murmur over the region of the middle lobe of left lung. Bronchial respiration somewhat marked. Per-

cussion gave dulness and pain over an area two inches in diameter and an inch and-a-half to the left of the median line of the sternum and over the vicinity of the bifurcation of the left bronchus. I gave it as my opinion that the foreign body, whatever it might be, was located in the region outlined above, and the best treatment would be to be conservative and await developments. Aside from the constant dry cough, the patient felt no inconvenience until the morning of August 3d, last, when I was called to see the patient, suffering from violent attack of coughing, accompanied by quite profuse purulent expectoration. During one of these fits of coughing he expectorated the tack that had passed into the bronchus eighteen months before. At this writing the irritation and cough have subsided, and while the respiratory murmur is no quite clear, yet the patient is on the road to recovery. The tack was inclosed in a dark, hard grumous substance, and had probably become encysted, and, in turn, by a suppurative process, had been liberated and expelled by the act of coughing. —*Dr. Wessinger, N. Y. Med. Jour.*

OBSTETRICS.

CHLOROFORM IN OBSTETRICS.

Dr. J. F. Baldwin, of Columbus, Ohio, in a paper read before the Ohio State Medical Society, entered a plea for the more frequent use of chloroform in obstetrics.

His obstetrical triad is as follows:

During the first stage of labor, morphia.

During the second stage of labor, chloroform.

During the third stage of labor, nothing.

Summary.—Chloroform relieves pain.

It shortens labor, usually.

It prevents shock.

Prevents nervous and physical exhaustion.

It reduces the liability to rupture of cervix and perineum.

It does not conduce in any material degree to post-partum hæmorrhage.

It does not affect the fetus.

It is absolutely safe when properly administered.

Contraindications.—1. Such conditions of labor as lead the obstetrician to believe that he may, at some supreme moment, require all the woman's voluntary efforts to assist him. Such conditions are very rare. 2. Fatty degeneration of the heart; though, if we accept the conclusions of the Hyderabad Commission, even this may not be a contra-indication; and the disease is practically never diagnosed except post-mortem.

AMAUROSIS IN THE ALBUMINURIA OF PREGNANCY.

Terrier (*Nouvelles Arch. d'Obstét. et de Gynéc.*, Supplement, September, 1891, p. 385) give brief notes of a case of this kind. The patient was eight months pregnant. Albuminuria set in, and the vision became seriously disturbed. The secretion of urine was greatly diminished, and the general condition was very unfavorable. Twenty ounces of blood were abstracted, and blisters applied to the nape and temples. Compound jalap powder, acetate of potash, and digitalis were administered; the patient was kept on milk diet. On the third day the secretion of urine increased, and the albumen disappeared, but it appears that the patient could not see to read until the sixteenth. Spontaneous labor took place at eight months and a-half. The patient then recovered completely. In this case, even when the symptoms were at their worst, it was not considered advisable to induce premature labor.—*Brit. Med. Jour.*

CUTANEOUS EMPHYSEMA DURING LABOR.

Greslou (*Bull. de la Soc. Obstét. et Gynéc. de Paris*, July, 1891) attended last March, a primipara, aged 24, free from any history of pulmonary disease. The presentation was right posterior occipital, and after a rather long labor the patient was delivered of a male child weighing nearly nine pounds. During the period of expulsion, during a long-sustained effort, the patient felt a crackling sensation in the right cheek, followed by swelling. During the succeeding pains the emphysema visibly increased. It caused great swelling on both sides of the face, but only involved the neck to a trifling extent. The emphysema lasted for two days, little altered, and was accompanied by a cough and slight dyspnœa. Then it rapidly diminished, and disappeared entirely at the end of five or six days. Treatment had been entirely expectant. Greslou notes that Depaul, De-Soyre, and Tarnier have described cases of puerperal emphysema. The complication is rare. It necessarily arises from a rupture of the respiratory tract at some point. If the lies in the larynx or trachea, the escape of air is usually confined to the face and neck, and is not dangerous save in those rare cases where it extends to the trunk. When, however, it is a pulmonary vesicle that has yielded, the complication becomes very serious. The air may escape into the connective tissue of the neck, but it may also fill the intervesicular, interlobar, and subpleural con-

nective tissue, and gravely embarrass the lungs and heart. This accident occurred in a case recorded by Depaul. The forceps was used directly the emphysema was detected, but the patient's condition grew worse, and she died forty-six hours after delivery. In mild cases, where the swelling is limited to the face and the symptom only develops towards the end of the expulsive stage, the forceps is hardly needed, but if there be marked emphysema at any stage the labor must be hastened. After delivery the emphysema usually disappears of itself. Should it invade the trunk and interfere with respiration, a few punctures may be made in the skin in order to allow of the escape of the effused air.—*Brit. Med. Jour.*

PUERPERAL INVERSION OF THE UTERUS.

Puerperal inversion of the uterus may be called immediate when it occurs at the moment of delivery, secondary when it takes place afterward, and chronic when it continues longer than the puerperal condition in which it originated. Statistics show that immediate inversion, though a very rare affection, is more frequent in primiparæ than in multiparæ. It is produced by two pathogenic agents: inertia of the uterus, and pressure from above downward. Adherent placenta is a frequent complication. As soon as the inversion takes place the placenta must be removed, if it has not already been taken away, and efforts made to reduce the tumor. The body of the uterus must be pushed back in such a way that the parts return in a reverse order to that in which they descended, the highest parts being first replaced. The operation may be compared to taxis, although it essentially differs from taxis in that the tumor is usually so large that the pedicle cannot be held by one hand, while the other exerts pressure from below upward upon the uterine mass. Place the hand upon the abdominal wall in such a manner as to fix the infundibulum formed by the inverted uterus, and seize the tumor with the other hand, pressing the fundus with the palm and the sides of the uterus with the fingers. By uniform and energetic pressure from below upward the resistant mass may be pushed back through the cervical ring, while the tumor is kept in place by the hand upon the abdominal wall. Instruments should not be used on account of the danger of perforation. If the operation is unsuccessful, we are compelled to choose between amputating the tumor and allowing things to remain as they are, in the hope that the inversion may become chronic. Prognosis in these cases is so grave, and the condition of the patient so unfavorable, that great boldness is required to undertake a radical operation; nevertheless it has been attempted, and followed in one-tenth of the cases by recovery. It is sometimes rendered imperative by gangrene of the inverted mass. Reports show that there is great danger hæmorrhage may follow section of the uterine and utero-ovarian arteries, and a ligature should, therefore, be placed around a part or the whole of the tumor.—*Journal de Médicine,* January 10, 1892.

GYNÆCOLOGY.

ANTIPYRIN TO DRY UP MILK SECRETION.

Guibert (*Archives de Tocolygie,* 1891) found incidentally that the administration of antipyrin, in doses of thirty grains a day, distinctly diminished milk secretion by the second day. He then tested the drug in nineteen cases. In seven cases the women nursed their children for several days, in the remaining cases not at all. Guibert found that in all cases the milk disappeared in several days.—*Univ. Med. Mag.*

PELVIC INFLAMMATION IN WOMEN:—A PATHOLOGICAL STUDY.

At the recent meeting of the Mississippi Valley Medical Association, at St. Louis, Dr. W. W. Potter, of Buffalo, read a paper entitled Pelvic Inflammation in Women:—A Pathological Study.

The author affirms that pelvic inflammations and their residues constitute about one-third of the diseases the gynæcologist treated, hence the importance of frequent discussions of all moot questions relating to the subject. He briefly reviewed the anatomical relations of the pelvic organs, calling attention to their enormous blood and nerve supply which became both their weakness and their strength. He contrasted the pathology of Bennet (1843) with that of Emmet (1873) and the latter with the teachings of Price, Tait, Hegur and McMurtry of the present age. He referred to the pathological studies of Bernutz and Goupil of thirty years ago, and affirmed that the observations of the present had served to confirm the correctness of those pioneers.

He next asserted that the pathology of to-day had been established by operative surgery which had shown that pelvic inflamma-

tion begins in the tubes or ovaries, and extends to adjacent structures through absorption or by contiguity; that it almost never begins in the cellular tissue, but may be carried there through the tubes and ovaries by infections either specific, puerperal or traumatic. He affirmed that the inflammation was, in most cases, a peritonitis, intra-pelvic or local in character, and not a cellutitis, that para- and peri-metritis were misleading and confusing terms, hence should be dropped, and that the so-called pelvic abscess was a sequence of salpingitis, ovaritis or peritonitis, not a primitive accumulation in the areolar tissue itself.

The tentative management in these cases, rest, counter-irritation, hot sitz baths, vaginal douches and attention to the digestive organs and general health resulted in only temporary improvement, or in cure in a very small percentage. Those reported cured were generally, if the history could be known, subject to repeated relapses and a frequent recurring pelvic peritonitis usually indicated leaky tubes. Electricity, too, had disappointed its most sanguine advocates and need not be considered.

In conclusion, he asserted that if these views be accepted the logical deduction was to watch the early manifestations of the disease carefully, that competent surgical skill be invoked before the damage to important structures became too great to justify the expectation of successful operation.

OBSERVATIONS IN REFERENCE TO THE USE OF ICHTHYOL IN FEMALE DISEASES.

Observations made by Oberth (*Der Frauenarzt, Hft.*, 19, 1891) do not agree with the excellent results reported by Freund. Oberth reports forty-two cases treated with ichthyol. Of these thirty-five were cases of chronic inflammatory swelling of the appendages, and four parametic exudations. His conclusions were that ichthyol does not have a specific effect upon the inflammations about the uterus, nor does it cause resorption of the products of inflammation. He did observe, however, that it quickly diminished the amount of pain. His favorite manner of using the drug is as a five to ten per cent. ichthyol-glycerine on tampons.

TONIC.

℞ Tinct. nucis vomicæ.....gtt. j.
Acid hydrochloric. dilut.....gtt. ij.
Extract. cascaræ fluid .....gtt ij.
Tinct. gentianæ comp.....gtt. v.
Aquæ .....ad f 5 j.
M. To be given three times a day.

PÆDIATRICS.

ICTERUS IN THE NEW-BORN.

From a pathogenic point of view, two forms of this disease must be distinguished, the acute and the chronic. Cuapf (*Rev. Mens. des Mal. de l'Enf.*, October, 1891,) basing his opinion upon his own observations and also upon the investigations of Silbermann, Naunyn, Minkowsky and Affanassiew, the author rejects the theory of a purely hæmatogenous origin for acute icterus, and believes that in all cases there is some disturbance in the liver itself. The new conditions of vitality, which are created by the establishment of respiration, the changes which take place in the circulation, etc., cause a decided change in the condition of the corpuscles, an excess of pigment in the liver, and then biliary stasis and resorption. With reference to chronic icterus, the researches of Gubler, Trousseau, Schüppel, and the author show that it is sometimes due to congenital faults in the formation of the bile ducts, and that it may also be due to acquired lesions of the hepatic tissue and biliary passages. Such lesions are very frequently the result of syphilitic inheritance.

EXALGIN IN CHOREA.

Löwenthal (*Berl. klin. Woch.*, February 1st, 1892) has treated thirty-five cases of chorea with exalgin, the single dose being 0.2 g., and the daily amount not exceeding 1 g. In some the attack was slight, in others severe; the former recovered quickly, but the latter required a longer time. A good number of the cases came under treatment during the first two or three days of the attack, and they mostly recovered in eight days, while others coming in the second week were ill for five to six weeks. In a few cases the disease had already lasted for some months. The smallest total amount of exalgin used was 2.4 g., the largest 112 g. The drug may thus be continued for months in doses of 0.2 g. It was particularly useful when there was much mental excitement. Among unpleasant effects, nausea was noted once, vomiting four times, and headache twice. Owing to giddinesss, it had to be giving up once and arsenic substituted. The chorea then became worse, and the exalgin was again tried with good effect. Jaundice occurred three times. The treatment with exalgin was then omitted and resumed in fourteen days. This is the first time jaundice has been noted after exalgin. In the very severe case of a girl, aged 8, there was

cyanosis of the lips after twenty-six doses. Arsenic was then given, and exalgin resumed in fourteen days without any return of the cyanosis. Exalgin was beneficial in the majority of the cases, but a specific action cannot be attributed to it.—*Brit. Med. Jour.*

THE CEREBRAL ATROPHIES OF CHILDHOOD.

From a review of the clinical types of cerebral atrophy in childhood, of the pathological conditions producing these types, and of the results of surgical treatment by craniectomy, the following conclusions may be drawn: (1) Hemiplegia, sensory defects and imbecility, occurring with or without epilepsy in children, are chronic diseases, incurable by medical treatment. Any means which may be legitmately used to save the individual from a life of invalidism, and to take the burden of care from the family, is to be employed. (2) The pathological conditions producing these symptoms may be either gross defects and atrophies of the brain or an arrest of development in the cerebral cells, without any change apparent to the naked eye. (3) It is at present impossible to determine absolutely the pathological condition present in any given case without an exploratory operation. (4) Such operations are not without danger, but if caution is used in opening the dura, and if the operation is made as short as possible, the dangers are avoided. (5) When manifest atrophies are present the operation will produce no result. When the condition is one of arrested development of cerebral tissue, it may prove of service. When clots, cysts, or tumors are found and removed the chance of recovery is increased. When the skull is markedly microcephalic from early union of the sutures, the increased space given to the brain by the operation seems to stimulate its growth and development. (6) Epileptic attacks are often reduced in frequency and modified in character by craniectomy. When the opening of the skull remains covered only by the soft tissues, it it appears to act as a safety-valve, allowing changes in the intracranial contents to occur without producing pressure on the brain. (7) While hemiplegia, aphasia, athetosis, and sensory defects have been relieved by the operation, it is as yet impossible to predict to what extent imbecility may be relieved. (8) Reports of cases should be made in full, and not within six months of the time of operation, as conclusions connot be trustworthy unless reached by long observation.—*Medical Record*, January 23, 1892.

NODOSE RHEUMATISM IN CHILDREN.

Perret and Diamantberger (*Rev. mens. des Mal. de l'Enfance*, 1891) relate a case of this disease in a girl ten years old. The disease began with pains in the knees and hands when the child was seven years old. Then it attacked the great toe, the radio-carpal and metatarsal articulations. There was also swelling around the three lower cervical vertebræ. Peculiar characteristics were painful paroxysms, with contractures of the muscles contiguous to the diseased joints, and a mitral insufficiency murmur. Nodose rheumatism in children should be distinguished from the same disease in adults by the following peculiarities: many joints are involved in an early period of the disease; there is less centripetal tendency in the evolution of the lesions, the large joints being frequently involved before the fingers, and the exacerbations are of frequent occurrence. During the chronic period deformities are less frequent than with adults, and there is less atrophy. Complications are less frequent; there are no disorders of sensibility, no dystrophy of the nails, no tuberculosis, and rarely any cardiopathies. As to the evolution of the disease, subacuteness is more noticeable at the beginning. The chronic state having been established, there may be improvement and even cure. The ordinarary causes are poverty and dampness, but heredity has no influence. Diamantberger recognizes an affinity between this disease and hysteria, Basedow's epilepsy, idiocy, myxœdema, acromegalia, and Paget's bone disease.

THE VAPOR OF NAPHTHALIN IN THE TREATMENT OF WHOOPING-COUGH.

As a result of considerable successful experience, Chavernac (*Bullettn Gin. de Thèrap.*, 40, liv., 1891, p. 337) recommends fumigation by means of naphthalin in the treatment of whooping-cough. About half an ounce of the drug is, on one or more nights, made to burn in a suitable vessel in the sick room, the windows and doors being tightly closed. The cough at once moderates, the dyspnœa and other symptoms are favorably influenced, and the attack is soon brought to an end. Complications may contra-indicate the employment of the treatment. Thus, individuals suffering with pulmonary tuberculosis cannot bear the treatment.

Green boughs of the eucalyptus tree are recommended to be hung in the room of scarlet fever patients.

HYGIENE.

STEAM AS AN AGENT IN CAUSING THE SPREAD OF DIPHTHERIA.

In a discussion on diphtheria, published in the *British Medical Journal* for September 19, 1891, Dr. Russell cited several instances in which steam had seemed to be an active factor in the propagation of the disease. Hot water and steam from a brewery were introduced into some old cesspools and evidently waked into activity germs which, if undisturbed would have remained dormant. An epidemic of diphtheria soon developed in the vicinity, and was not checked until the steam was turned into other channels, when it quickly ceased. If, as we now believe, the bacillus of diphtheria develops with special rapidity in the presence of warmth and moisture and absence of light, it is not unreasonable to suppose that the introduction of hot water or steam into cesspools or sewers may be a most dangerous procedure. The maintaining of a considerable degree of heat in sewers can certainly not be wise from a hygienic point of view. Yet this condition prevails quite largely in New York, where sewers and water pipes are in many places kept at a continuous high temperature by the close proximity of the pipes of the steam-heating companies. No more favorable medium for the culture of micro-organisms could be found than warm sewage. Given an imperfect trap and a vulnerable mucous membrane, and an attack of diphtheria is almost assured.

DISINFECTION OF DENTAL INSTRUMENTS.

There is no department in surgery, writes Dr. Miller, of Berlin, in which the demand for antiseptic procedure is more urgent than in dentistry, for the reason that all the operations are performed upon septic or infected tissues and there are no means of rendering the territory to be operated upon aseptic except by the use of antiseptics of the highest character. The necessity of absolute cleanliness on the part of the dentist, of his hands as well as his instruments, diapers, drinking glasses, rubber dam, in short, everything which comes in contact with the patient's mouth, is universally recognized, and yet it is not difficult to find persons engaged in the practice of dentistry who neglect this matter to an extent that is revolting to the taste and dangerous to the health.

In regard to the possibility of transmission of disease, such as pyemia or syphilis, by dental instruments, there have been so many cases recorded in dental and medical journals that the matter should be familiar to every practitioner of dentistry. With reference to diapers, Dr. Miller found that boiling in water for ten minutes completely sterilized them, and no development of bacteria could be produced in agar-agar. The rubber dam should be soaked in a 5 per cent. solution of carbolic acid for at least half an hour, or boiled for a few minutes, but preferably a new piece should be used for each case. The ideal antiseptic for instruments is a liquid which acts immediately upon bacteria without in any way injuring the instruments themselves. There is a vast difference between sterilizing liquids and sterilizing solid bodies, and an antiseptic which sterilizes a drop of water almost instaneously may require a quarter of an hour to sterilize a solid body, particularly when it is coated with a layer of dried albuminous material, as dental instruments are liable to be. The length of time necessary to sterilize a body by a chemical agent depends greatly upon the character of the body, as well as upon the character of the matter with which it is coated. Porous bodies, as may be readily understood, are more difficult to sterilize than non-porous ones; also the drier and more insoluble the material with which the body is coated, and the more liable it is to form inert compounds with the antiseptic, the more difficult it will be to sterilize. It is consequently, above all things, desirable to employ the antiseptic in a form in which the infectious matter is soluble, and this in the vast majority of cases is in an aqueous solution. Dr. Miller has performed about a thousand experiments, and gives in a tabular form the results obtained with the most noticeable agents. Of carbolic acid, he says the impression exists amongst a great many that it is but necessary to dip the instrument in the solution for a fraction of a minute in order to render it completely sterile, but thorough sterilization with a 5 per cent. solution cannot be counted upon with moderate certainty in less than an hour, and a large burr, such as is used with the dental engine, after two hours' exposure was still found to contain living germs. Trichlorphenol gave slightly better results. Bichloride of mercury in a 5 per cent. aqueous solution was found to be by far the most prompt in its action of all the substances tested, but its powerful action upon the steel interferes very seriously with its constant use for sterilizing instruments made of this material. Peroxide of hydrogen came next to carbolic acid, but

it was considerably inferior to it. The essential oils utterly failed to produce the desired action. Boiling water, especially when a 2 per cent. solution of carbonate of soda is added, is, in Dr. Miller's opinion far superior to all other means of sterilizing; it will accomplish in two minutes as much as the chemical agents ordinarily used will in half an hour.—*Lancet.*

ADMINISTRATION OF ALCOHOLIC BEVERAGES TO CHILDREN.

The *Journal de la Santé* calls attention to the habit many persons have of giving infants and children alcoholic beverages like whisky, brandy or beer to induce sleep. This practice cannot be too strongly condemned, for aside from the injurious effects of alcoholic drinks upon the child's system, the restlessness can be more effectually controlled by a tepid or warm bath given at bedtime, especially during the period of dentition. When young children are delicate, a few drops of brandy given occasionally in milk, may have a good effect, if the child suffers from digestive trouble. It should be remembered that 15 or 20 drops are ample for a baby and a larger quantity should not be administered without the physician's advice.

TEMPERANCE AND THE LONGEVITY OF CLERGYMEN.

It is satisfactory to know, on the authority of Dr. Drysdale, that the mortality of the clergy of the Established Church of England has fallen greatly since the spread of the temperance movement among them. Whereas between 1861 and 1871 the mortality of the clergy between the ages of twenty-five and forty-five was 5.96 per 1,000, it fell between 1880–82 to 4.64 per 1,000. The question may be raised whether this apparent lessened mortality among the clergymen may not be evidence of the universal fall in the death-rate during recent years, of which the apostles of sanitation claim the credit.—*Hospital Gazette.*

CLEANSING OF THE HANDS AFTER THE USE OF CARBOLIC ACID OR CORROSIVE SUBLIMATE.

Carbolic acid is removed from the hands by bathing them for a sufficient time in alcohol and then anointing them with lanolin. after the use of corrosive sublimate solution the hands should be bathed in a solution of common salt 1 to 50, then washed with soap and water, and finally rubbed with lanolin.

MEDICAL CHEMISTRY.

A SUBSTITUTE FOR GUM ARABIC.

The *Mühlen und Maschinen-Industrie Zeitung* is authority for the statement that a German patent has been issued for a process of manufacture of a substance to take the place of gum arabic. Wheat bran is the substance treated, the process being described as follows: By first washing with water all adhering starch is removed from the bran, whereupon it is boiled with an ammoniated salt solution in order to remove the proteins. After expressing and lixiviating with clear water, there remains a mass of cellular tissue containing metarabin. This cellular tissue is boiled, under pressure, with milk of lime or a one per cent. solution of potassa, then expressed, the liquid neutralized and finally concentrated by evaporation. The resulting mucilage is claimed to possess strongly adhesive properties.

HYDRAZOIC ACID.

Professor Curtius, in the *Berichte der Chemischen Geselschaft*, reports the results of his further examination of the compound N_3C, to which the names of hydrazoic, nitrohydric, and imidazoic acids have been applied by different investigators. Professor Curtius describes his methods of obtaining some of the salts of the acid, upon which investigation can be carried out with less danger than with the material itself. The silver salt N_3Ag may be obtained in colorless crystals by evaporating an ammoniacal solution. It is violently explosive. The mercurious salt N_3Hg is crystalline, and acquires a yellow color on exposure to light. It is less explosive than the silver salt, and on the addition of ammonia is converted into a black, insoluble substance. The lead salt N_6Pb forms colorless crystals, closely resembling lead chloride. It is insoluble in ammonia, and very sparingly soluble in boiling water, and when slightly warmed exploding with great violence. The sodium salt N_3Na is also crystalline. It is feebly alkaline, very soluble in water, insoluble in alcohol and in ether. It does not explode when struck, but only when heated. The ammonium salt N_4H_4 is extremely explosive, and very volatile, but can be crystallized from a solution in boiling alcohol. On the addition of ether to the alcoholic solution, the salt is precipitated in the form of a snow-white crystalline powder. A water solution evaporated in vacuo yields large transparent prisms, which become dull on exposure to the air.

TO DETECT SUGAR IN URINE.

Flint (*Medical News*) describes a simple apparatus for detecting the presence of sugar in the urine, when the results of Fehling's tests are uncertain. A small straight bottle or a small test-tube is fitted with a cork, through which is passed a small tube that reaches nearly to the bottom. The glass tube is bent so that the apparatus will hang over an ordinary test-tube or other convenient vessel. The bottle is completely filled with urine, with which a piece of Fleischmann's yeast, about the size of a pea, has been thoroughly mixed. In putting in the cork it is necessary to be careful to exclude every bubble of air. If the apparatus be kept for a half hour at a temperature of from 80° to 90° F., a bubble of gas will appear if sugar be present in the smallest quantity. The apparatus may be placed in the sun or near a heater, but the temperature should not be higher than 100°.

NEW THERMOMETRIC SCALE.

F. Salmon (*Zeit. f. angew. Chem.*) proposes a scale which has an absolute relation to zero, so that its readings directly indicate the volumes of gases at various temperatures. The starting point is 273° C.; from this to the freezing point of water the scale is divided into 100 equal parts, so that 0° C. corresponds to 100 of the new scale. From this to 273° C. the scale is again divided into 100 equal parts, 273° C. being 200, the same proportion of division being continued as far as desired. Each degree of the scale is therefore equal to 2.73° C. and 1° to 0.3665° of the new scale; the boiling point of water lies at 136.6°, The use of the new scale is seen from the following examples: One cubic metre of gas at 0° C. or 100° absolute temperature would measure at the boiling point of water (136.6°) 1,366 liters. At 200° C. or 173.2 absolute temperature, it would have a volume of 1,732 liters. G. Lunge recommends this scale as forming the solution of a little difficulty which is felt in gas analysis.

ESTIMATION OF TOTAL ALKALOIDS IN QUININE BARKS.

The following method has been recommended by Herr W. Haubensak as preferable to that in general use; the chief difference is that sulphuric acid is used to take up the alkaloids from the ether-alcohol ammonia solution, by which means they are obtained free from resinous matters and wax: Twenty grams of the bark is very finely powdered and put into a 500 c.cm. flask with 10 c.cm. of 10 per cent. ammonia and 20 c.cm. of 94 per cent. alcohol; 170 c.cm. of pure ether is added, and the whole shaken occasionally during two or three hours. Pour off 100 c.cm. of the clear extract into a separator, and shake with 50 c.cm. of water and a slight excess of sulphuric acid. Allow the fluids to separate, and run off the lower acid solution; warm, to expel the dissolved ether, and return to the separator; add 30 c.cm. of chloroform, liberate the alkaloids with a few drops of soda, shake well, run off the chloroform solution on to a tarred dish. Allow to dry spontaneously in the air, and then at 100 degrees, and finally weigh. The process occupies four or five hours, and is entirely satisfactory.

NEWS AND MISCELLANY.

THE PAN-AMERICAN MEDICAL CONGRESS.

The Committee on Peamanent Organization met at St. Louis, October 14, 15, and 16, 1891, and adopted a series of General Regulations for the permanent organization of the Pan-American Medical Congress, and a series of special regulations for the government of the first meeting, and recommended that the Incorporators adopt both series of regulations as the organic law of the Congress.

Pursuant to such Regulations the following general officers were elected:

William Pepper, M.D., LL.D., Philadelphia, Pa., President; Abraham M. Owen, A.M., M.D., Evansville, Ind., Treasurer; Charles A. L. Reed, M.D., Cincinnati, Ohio, Secretary General.

International Executive Committee:—Argentine, Dr. Pedro Lagleyze; Bolivia, Emilio de Tomassi; Brazil, Dr. Carlos Costa; British North America, Dr. James F. W. Ross; British West Indies, Dr. Jas. A DeWolf; Chili, Dr.Moises Amaral; Columbia, P. M. Ibañez; Costa Rica, Dr. D. Nuñez; Ecuador, Dr. Ricardo Cucalon; Guatemala, Dr. José Monteris; Haiti, Dr. D. Lamothe; Hawaii, ———; Spanish Honduras, Dr. George Bernhardt; Mexico, Dr. Tomas Noriéga; Nicaragua, Dr. Juan I. Urtecho; Paraguay, ———; Peru, Dr. José Cassamira Ulloa; Salvador, Dr. David J. Guzman; Santa Domingo, ———; Spanish West Indies, Dr. Juan Santos Fernandez; United States, Dr. A; Vander Veer; Uraguay, Dr. Jacinto De Leon; Venezuela, Dr. Elias Roderiguez; Danish, Dutch, and French West Indies, ———.

The Auxiliary Committee nominated by the various members of the Committee on Permanent Organism each for his own state, and already commissioned by the Chairman, was affirmed.

The election of officers of sections was begun, but time would not permit of the completion of the list which was referred to a special committee with power to act. It has been deemed inexpedient to publish the list until it is completed, which can hardly be accomplished before the meeting of the Committee on Permanent Organization at Detroit in June; but the organization of particular sections will be announced through the medical press as rapidly as officers are elected by the special committee.

In accordance with the wish of the Committee on Permanent Organization as expressed in Special Regulation No. 4, Drs. I. N. Love, A. B. Richardson, L. S. McMurtry, R. B. Hall, T. V. Fitzpatrick, and Charles A. L. Reed met in Cincinnati and signed the legal form of application for Articles of Incorporation of the Pan-American Medical Congress, which Articles of Incorporation were duly issued by the Secretary of the State of Ohio, under date of March 15, A.D. 1892.

At a meeting of the Incorporators held March 16, 1892, the Regulations, general and special, recommended by the Committee on Permanent Organization were formally adopted as the organic law of the Pan-American Medical Congress in accordance with the Laws of Ohio, and all elections had by the Committee on Permanent Organization, in accordance with such regulations were confirmed and made a part of the laws of the Congress.

Pursuant to the Laws of Ohio and the Regulations adopted as above, and in accordance with nominations by the Committee on Permanent Organization, the Incorporators elected fifteen Trustees as follows:

Dr. W. T, Briggs, Tenn.; Dr. Geo. F. Shrady, N. Y.; Dr. P. O. Hooper, Ark.; Dr. S. S. Adams, D. C.; Dr. H. O. Marcy, Mass.; Dr. J. F. Kennedy, Iowa; Dr. H. D. Holton, Vt.; Dr. L. S. McMurtry, Ky.; Dr. N. S. Davis, Ills.; Dr. Levi Cooper Lane, Calif.; Dr. I. N. Love, Mo.; Dr. Hunter McGuire, Va.; Dr. J. C. Culbertson, Ill.; Dr. A. Walter Suiter, N. Y.; Dr. C. H. Mastin, Ala.

Drs. L. S. McMurtry (Ky.), I. N. Love (Mo.), and W. W. Potter (N. Y.), were designated to act as members of the Executive Committee.

The organization of the Congress is complete in British North America, the British West Indies, the Spanish West Indies, Gautemala, Nicaragua, United States of Colombia, Brazil, Uruguay, Venezuela, and the Argentine. It is confidently expected that the nominations from the remaining countries will be in by June.

It is expected to announce the completed organization of the Congress, its sections and auxillary committees, domestic and foreign, by July 1, 1892.

On behalf of the Committee on Permanent Organization.

Charles A. L. Reed, Chairman.
J. W. Carhart, Secretary.

DR. D. HAYES AGNEW.

At a meeting of the Medical Faculty of the University of Pennsylvania held Thursday March 24th, the following minute was adopted:

The Faculty of the Medical Department of the University of Pennsylvania, desires to place upon record its profound grief at the irreparable loss sustained in the death of Dr. D. Hayes Agnew, and to express its thorough appreciation of the nobility of his personal character and the enduring excellence of his professional achievements.

Dr. Agnew was for years a regular attendant at the meetings of this Faculty, and his wise counsel, his unswerving advocacy of every progressive movement and of all that tended to raise the standard of teaching and of the profession, have left their indelible mark on the history of its proceedings.

As a didactic lecturer, he was unsurpassed. Without apparent effort and with a skill born of thorough knowledge and perfect mastery of his theme, each subject was presented to the student so clearly, simply, and directly, that it remained a part of his medical knowledge.

As a clinical lecturer, his enormous experience and his diagnostic and operative skill made him pre-eminent. The skill, which amounted to genius, was the foundation of his scientific greatness, and often enabled him at a glance to detect conditions which had eluded the search of others. No clinical observation even in times long past, escaped his memory, and his experience, almost without exception, furnished a parallel to the rarest and most obscure cases. He had, in addition, the faculty of elucidating in a few words the method by which he reached his conclusions, and this unusual combination of qualities gave him his unquestioned position as the leading teacher and practitioner in surgery in this country. His colleagues can bear

witness to his warm friendship, which never failed in time of need; to his genuine love for his work and his eager desire to acquire every new fact that might benefit his patients; to his generous support of the feeble, the halting and unfortunate in the profession; to his respect for every honest opinion even if it differed from his own; to his quick and ready sympathy and his tender treatment of all those who claimed either his personal or his professional help. His gentle courtesy and kindly bearing won the love of all with whom he came in contact. To the members of this Faculty, his students of years gone by, his colleagues of yesterday, and always his loving friends, his death comes as a personal bereavement.

Resolved that a copy of this minute be sent to the family of Dr. Agnew, and that it be suitably published.

JAMES TYSON,
March 25th, 1892. Dean.

MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.

The Chair of Obstetrics has become vacant through the resignation of Dr. E. E. Montgomery, who will hereafter devote himself entirely to the Chair of Gynæcology.

A NEW AND POWERFUL LIGHT.

A very intense light, such as is required for photographic or occasionally for medical purposes, may, as is well known, be readily obtained by burning magnesium ribbon, which has, however, the disadvantage of being somewhat expensive. An excellent substitute has been found by a French chemist, M. Villon, in aluminium, which is about a third of the price of magnesium, and which may be utilized in the same manner by burning it in a spirit lamp, or, if a flame of much more intense brilliancy is required, in a coal, gas, or spirit flame supplied with a jet of oxygen. In these it burns without emitting fumes, in which respect it is superior to magnesium. The light given by aluminium has a high actinic power—nearly as high, indeed, as that of magnesium. The most convenient way of obtaining a very intense light, according to M. Villon, is to use a lamp provided with a jet of oxygen at the centre of its flame, into which powdered aluminium mixed with a quarter of its weight of lycopodium and a twentieth of its weight of nitrate of ammonium can be projected by means of a tube furnished with an air-ball. This gives an exceedingly intense light, without smoke. A mixture of aluminium powder with chlorate of potash and sugar can be ignited, giving an intense light by means of gun-cotton, but is somewhat dangerous. Probably the best plan for medical photography, or for laryngoscopic and auroscopic and other demonstrations, would be to burn a ribbon of aluminium in an ordinary spirit lamp. Of course, if oxygen and an oxy-hydrogen, or an oxy-alcoholic, lamp were at hand a much more intense light could be obtained.—*Lancet.*

DR. BROWN SEQUARD AND ISOPATHY.

Drs. Brown-Sequard and d'Arsonval propose a *new* therapy, (*Rev. int. de bib. Med.*) consisting of combating the morbid manifestations of an organ, by injecting the juicy extract of that organ. Thus in cases of myxœdema, of exophthalmic goitre, or after thyroïdectomy, they propose to use the *thyroïdian juice;* in cases of Addison disease, the liquid of suprarenal capsules; in diabetes, the juice of pancreas; in cases of leucocythæmia, the juice of lymphatic glands, of spleen or of marrow of bones; in cases where the muscles are flabby, thin and weak, without any existence of nervous affection, of juice extracted from muscles. The liquids extracted from glands or other organs of mammalians, without sufficient sterilization and filtration, generally always cause death in less than ten days, but rarely by septicæmia, which prove that toxic substances or those liable to become so, are furnished by the principal organs of the system. The juice extracted from sexual glands are the only exceptions and are not dangerous. The method employed by the authors is to prepare a glycerinated solution made of one-tenth of the juice, obtained by maceration of the tissue for about a half hour, adding to it three times its weight of pure officinal glycerine, then macerate for another half an hour, after adding distilled water six times the weight of the tissue juice. Filter and sterilize by CO_2 at 40 atmosphere.

Thus Dr. Onimus, of Monaco, has used, in a case of asystole, the hypodermic injection of cardiac muscle, which made the suffocative attack disappear. Other symptoms, such as, difficulty to walk, breathlessness, general weakness, have been ameliorated by injections of extracts prepared by maceration of pieces of spinal marrow in glycerine. Similar injections have ameliorated a case of labio-glossolaryngeal paralysis, and same results obtained in three other cases of spinal troubles, such as, transverse myelitis, chronic meningitis and ataxia in its early stage.

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THE
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No. 1833. PHILADELPHIA, APRIL 16, 1892. Vol. LXVI.—No. 16

CLINICAL LECTURES.

GRIPPAL PNEUMONIAS: I.—GRIPPAL PNEUMONIAS FROM A CLINICAL POINT OF VIEW. II.—ACTION OF THE GRIPPAL POISON. III.—THERAPEUTIC INDICATIONS. IV.—TREATMENT.*

By H. HUCHARD, M. D.,
of Paris, France.

I.—GRIPPAL PNEUMONIAS FROM A CLINICAL POINT OF VIEW.

Gentlemen:—I have told you, based upon microbiological researches, that grippal pneumonias are not different from the fibrinous pneumonias, since in both cases the same pathogenic germ, the pneumococcus, is found. I have likewise said that another microbe, the streptococcus, is frequently met with in all the pneumonias of influenza. Finally, it has been established that grippal infection is the result of microbian associations, and, without taking into consideration the new bacillus of Pfeifer, there have been described in patients suffering from the grippe many pathogenic germs, such as the streptococcus pyogenes, the staphylococcus pyogenes aureus, and the pneumococcus. Undoubtedly, it is to this association of microbes that the troublesome and complex pathology of this peculiar malady is due. Considering the numerous medical opinions which have originated at every new outbreak of the epidemic, I may repeat what an old historian of the 15th century has remarked: "No physician, nor anybody else, has been able to say what the disease is."

Clinical studies have sufficiently revealed to us that influenza is of microbian origin, and as I have already gone over this matter, though in a rapid manner, I deem it of importance now to consider the subject from clinical and therapeutic points of view. In regard to microbicidal medication, this will first claim our attention.

Certainly during the epidemic of the grippe we find fibrinous pneumonias (that is pneumococcic pneumonias, to use the language of to-day) which do not arise directly from the disease in question. Such pneumonias take their regular course, exhibiting well-known symptoms, symptoms which are unnecessary for me to mention. We also have, however, grippal pneumonias which belong essentially to the epidemic affections, (streptococcic pneumonias, if you please) especially pneumonias which clinical studies have made known to us.

You have seen patients presenting all the signs of pulmonary hepatization with more or less dullness over one of the lungs, accompanied with bronchial murmurs, crepitant râles, increased vocal fremitus, a decrease in the bronchophony of the voice and more or less intense dyspnœa. After these physical signs are manifest, fibrinous pneumonia appears under more marked characters, and, nevertheless, there are noticed the following peculiarities: there are no rusty sputa; the expectoration consists of a thin, frothy and scanty fluid, resembling a gummy solution; sometimes the sputa are compact, muco-purulent and absolutely deprived of air. In these instances, bacteriological examination of the sputa has revealed, according to Duponchel, an important peculiarity, that is, the absence of the capsulated diplococci of pneumonia. That is not all. The patient may have pain on the side, but there is no sign of friction which is so characteristic, or he may exhibit some slight and repeated frictional signs similar to those observed in pleurisy. The disease may come on in an insidious manner, so to speak, making itself known only by a feeble pain on the side, a more or less pronounced febrile reaction and by symptoms of dyspnœa. After the eighth day, defervescence takes place, but this is only incomplete and ephemeral. Soon afterwards the fever is re-estab-

*A Clinical Lecture delivered at the "Hôpital Bichat."

lished, at the same time new pneumonic foci make their appearance at various points of the pulmonary parenchyma. Here we have, in a word, a pneumonia coming on by successive steps, in which the thermal curve is absolutely different from that of common pneumonia, the condition resembling more one of broncho-pneumonia.

We have other pneumonias characterized by a rapid march, soon arriving at the stage of hepatization, accompanied with a sanious and abundant expectoration, which are really *galloping* pneumonias (so named, since 1880, in the thesis of my pupil Doussian),* their whole evolution taking place in the period of from forty-eight hours to three days at the least.

We also have bastard pneumonias so-called, which are observed under the form of pulmonary atelectasis, of a subacute and slow progress, without great elevation of temperature, and which can be borne for many weeks without any therapeutic interference. You have active and rapid pulmonary congestions, in which a true hæmoptysis may lead you to suspect tubercular trouble, but in which there is an absence of the bacillus Koch in the bloody expectoration. If in such instances the temperature is not very high, it may at least reach 41° C., as in two cases described by Doussian, both of which recovered. Again, these pulmonary congestions are characterized, from a stethoscopic point of view, by a diminution or total absence of the vesicular murmur. Respiration is quiet, the expectoration resembles a thick, gummy solution, and to establish the diagnosis of *congestion of the lung,* you have no other signs than the dullness, the increase in the thoracic vibrations and the dyspnœic condition of the patient. Still in another class of cases, both lungs become the seat of numerous compact, crepitant râles which convey to the ear the sensation of a small, fine shower, the whole condition presenting an aspect of a mixture of pulmonary congestion and œdema. Deceived by the absence of respiratory murmurs, you may be induced to give a favorable prognosis; but the congestive wave, so to speak, continues; both lungs become affected from the base to the apex, cyanosis makes its appearance on the lips and on the extremities which become also cold, and to your astonishment your patient is carried away by almost acute asphyxia. This mechanical asphyxia, however, is not always produced by the congestive trouble; it may also be the result of a true *massive pneumonia,* as we to-day term it, and as Nonat so well observed during the epidemic of 1837, and in which he described pseudo-membranous concretions obliterating almost completely the lumen of the bronchial tubes.

The asphyxia may have a different origin, not being due simply to mechanical disturbance as the result of pulmonary obstruction from the congestive condition. The patient may have bronchitis with limited pulmonary congestion, accompanied with large crepitant râles, but without a blowing respiration. The tongue may remain moist, the bodily temperature but little affected, and led by these negative signs, you will not give much attention to the gravity of the prognosis. You notice, however, a condition of dyspnœa, a condition at variance with the comparatively stethoscopic phenomena. Soon afterwards, the respiration becomes embarrassed, the expectoration is difficult or ceases altogether, congestion advances quickly, and asphyxia rapidly kills the patient; or else, as is often the case, death takes place through syncope, preceded, for a few hours, by the symptoms of cardiac collapse. Graves, who has observed these cases, says, and not without reason, that patients succumb to "pulmonary paralysis." These pneumonias or congestion of *bronchoplegic* or *cardioplegic* form, as I call them, attack the nervous system and particularly the functional activity of the vagi.

I have gone so far without saying anything to you about meta-pneumonic purulent pleurisies, pulmonary gangrene, bronchitis with purulent expectoration, and other forms of pulmonary congestions, etc. I will endeavor to show that there is no such thing as a grippal pneumonia, but that we have grippal pneumonias. Clinical studies demonstrate this and bacteriology confirms it. We have congestive pneumonias, inflammatory pneumonias, and suppurative pneumonias: those produced by the pneumococci, and those caused by the streptococci. The grippe raises to the highest point the virulence of all micro-organisms, and this explains the frequency and the constant threatenings, so to speak, of infections secondary to this disease. If all fibrinous pneumonias terminate frequently by gray hepatization, this is because the microbes of suppuration co-exist with the pneumococci, and it may be said, therefore, that all suppurative pneumonias are the result of secondary infection.*

*Doussian:—Contribution à l'étude des formes cliniques et du diagnostic de la grippe (Thèse inaug. de Paris, 1880).

*D. Plaguere (Thèse inaugr. de Paris, 1888).

Many are the varieties of these grippal pneumonias. Potain said to me one day, apropos of an extraordinary case of influenza which I brought to his notice "With this grippe one has to re-study his pathology." The same thing may be said in regard to the therapeutic management of the disease.

II.—THE ACTION OF THE GRIPPAL POISON.

Grippal pneumonias do exist, as I have endeavored to show you by clinical study; they have their own individuality, their peculiarities and their special characteristics. But in the midst of the various and complex assemblage of these pneumonias, there is an important fact which has called the attention of clinicians of all countries and at all times, and that is, the nervous asthenia, the profound adynamia. This nervous asthenia precedes or accompanies all the local manifestations of influenza, and may at the same time continue for weeks and even months. There is one thing that you have observed, and which Graves refers to as a pulmonary paralysis, and which I myself attribute to a sort of inertia or paralysis of the vagi nerves.

Such may by explained, on the one hand, by the production of rapid pulmonary congestion and on the other, by phenomena of bronchial paralysis which I have studied under the name of *bronchoplegia* or else *cardioplegia*, a condition that is apt to produce death through a marked asphyxia, or suddenly (although this exceedingly rare) by an unforeseen cardiac syncope. The pneumogastrics of certain grippal patients, as I have observed during the last epidemic, are undoubtedly greatly affected, proved by the fact that the pulse is slowed in many cases, such forming a singular contrast with the elevation of the bodily temperature. One of the historians of the epidemic of 1837, Landau, has remarked that the pulse, ordinarily large and full in this affection, was sometimes small and slow, and except in two cases in which it rose as high as 86, it never passed 72, and most generally it varied from 60 to 68.

Again, during an attack of influenza the arterial pressure is diminished, the elasticity and contractility of the weakened vessels no longer sustain the heart which, deprived at the same time of its normal influences and vascular supply, is the prey of exhaustion; hence, cardiac collapse. There comes, similarly, a peculiar syndrome, a condition which I am in the habit of speaking of as a fœtal rhythm of the cardiac beat, a condition which I have studied under the name of *embryocarditis*, and which I regard as the precursory sign of approaching dissolution.

The grippal poison not only paralyzes the pneumograstric nerves, it not only threatens the contractility of the bronchi and the heart itself, but it also acts upon the medulla oblongata, which explains the production of certain hyperthermias; hyperthermias incompatible, indeed, with the by no means marked intensity of the local lesions, with the Cheyne-Stokes respiration, or with the post-grippal glycosuria and albuminuria which I have observed.

III.—THERAPEUTIC INDICATIONS.

I have often said, and will now repeat, that in pneumonia the disease is in the lungs, but the danger is in the heart. In grippal pneumonia the danger lies chiefly in the nervous system. It is our knowledge of this fact that must lead us to recognize the therapeutic indications.

In all grippal manifestations we ought not to consider this or that diseased organ and direct to that alone our therapeutic measures. For instance, a simple disturbance of the stomach shows itself. It persists after many weeks notwithstanding all treatment. If in that simple gastric derangement, (which is only a point in your diagnosis) you take nothing in consideration but a diseased stomach or else an intestine in which there is a rapid increase of toxines or micro-organisms, then your therapeutic medication is irrational. Behind this affection, although simple in appearance, there is an alteration of the nervous system, an asthenia difficult to overcome and against which you may wrestle without a chance of success. This is true during an epidemic of influenza, when without fever or any local manifestation, the disease is only characterized by this nervous asthenia to which the term *grippal state* may properly be given. It is this asthenia, without any gastric disturbance, that you try to combat when it is free from all complication. You must not forget that derangement of the stomach is only an element superadded to the nervous asthenia.

The same holds good in regard to grippal pneumonias; but here, the intensity of the inflammatory processes is such, that very often all your attention is directed to the lungs, which permits you to see only a diseased organ when, in fact, the whole system is affected. What can you do against a pneumonic process which must have its own precise cyclical evolution? Nothing, or almost nothing. We no longer recommend the expectorants, kermes mineral, antimony, that

is, all those remedies which depress the heart; nor blood-letting which depresses the forces and which is only indicated in special cases, such as peripneumonic congestion or threatening mechanical asphyxia; nor even blisters, which constitute the chief indication, are now ever employed. If you follow such a practice, employing these medicaments and measures in a systematic manner, from routine, you will only make conditions worse, by adding a bad remedy to a bad disease.

In the course of pneumonia or pulmonary congestion, there is a compensatory organ which will be called upon to wrestle constantly against the enormous disturbance of the circulation, and such an organ is the heart. It is that which, from the very beginning of the disease, must be sustained and strengthened in a systematic manner, without waiting for the organ to become weakened in its functional activity and contractility. You must not forget that in influenza the heart is more markedly affected in its nervous mechanism than in its muscular element. This in view, you must not commit the error which I shall presently point out to you. A pneumonia, more or less diffused, is developed. The heart, apparently unaffected during the first few days, becomes accelerated in its action, the systole is vigorous, the pulse has a vibrating character, and owing to these circumstances you are apt to believe in non-cardiac interference. You do not notice that the heart is acting violently in the struggle, and that as a result of this, exhaustion of it will ensue, from which it will never recover; and that this apparent cardiac force is an index, a proximate cause of its weakness. Such order of things have I observed in many cases.

Following this period of excitation, weakness of the organ ensues, and it is only at this time that you think of administering digitalis, when nothing can be done for an organ whose contractility has been enfeebled, and when diuresis cannot be produced owing to the impermeability of the kidneys, this condition appearing at an advanced period of the disease. Digitalis must be prescribed at the very beginning of the pneumonia. It is this method of treatment which I especially recommend, and which has been adopted by other authors, such as Traube, Hirtz, Coblentz, Duclos, Sancerotte, Jurgensen, etc.

To combat the effects of pneumonia, or to prevent them, we must direct our attention to the heart, and this should constitute a principle of therapeutics, to which I have given the name of *compensatory therapeutics*. I will explain myself.

You are in the presence of a serious case of icterus. The symptoms become more and more alaming, the adynamia is profound, and hæmorrhages threaten the life of the patient, when suddenly there appears a marked urinary crisis and a fatal issue is warded off. What is the lesson taught us by a clinical case of this nature? It shows us that such a result has not depended upon the liver, that is, upon the affected organ, but upon the compensatory organ, upon the kidneys that serve to eliminate the morbific elements, the toxines which the hepatic cells, profoundly altered, have not been able to destroy or neutralize. You know very well that in order to have a healthy functional activity of the organism, when a portion of it fails in its action, another must take its part. One of the functions of the liver is to destroy the numerous toxic bodies that go through its structure, while it is the duty, so to speak, of the kidneys to eliminate poisonous materials. Therefore, in diseases of the liver our medication must be directed to the renal organs; in cases of pneumonia the heart is the focus around which we must concentrate all our attentions. In one word, and as one of my oldest resident physicians, Weber, has fitly remarked: "When an organ is affected we must look after the healthy and compensatory organs." You must, therefore, exercise in therapeutics a sort of turning movement; and you know that often a turning movement will lead you to the accomplishment of a brilliant victory.

The indications for the use of digitalis present themselves almost in all cases of fibrinous pneumonias, not only to combat the febrile element, not to act directly upon the pneumonic process, (which is impossible), but to give the heart a kind of reserve power for the expected struggle, and moreover, to enhance diuresis, thus bringing about a depuration of the organism. It is to insure this depuration that we must exercise an influence upon the kidneys and upon the digestive tract to modify fermentation by means of intestinal antisepsis.

Finally, clinical studies show that the nervous system must be sustained and strengthened. The administration of digitalis must be resorted to in all these cases of grippal pneumonia in which the vagi nerves and the medulla are more or less affected, and in order also to avoid auto-intoxication through the inactivity of the eliminative organs. Digitalis must be prescribed at the beginning of the disease, on the first or second day at latest, for the reasons I have sufficiently impressed upon you.

IV.—TREATMENT.

In what form and doses shall you prescribe digitalis? It is not well that we should point out the indications for the use a remedy only, it is also of importance to know how to use this, for a good instrument in the hands of the inexperienced becomes a bad one.

I must remind you, firstly, that I have for some time back abandoned the infusion of digitalis. I do not in any way agree with the opinion of Bernheim, of Nancy, who, in speaking of the treatment of pneumonia, says: "I have never seen digitaline act in those cases in which the simple infusion of digitalis has failed, while I have seen this do good in those instances in which digitaline produced no effect." For the last four years I have employed the crystalline form of digitalis in a solution of the strength of 1 to 1000. This preparation is well borne by patients, it has an invariable and certain action, and its dosage is easily managed. I prescribe at once, some time in the day, 30, 40, or 50 drops of the solution mentioned, the last amount representing one milligramme of the crystallized digitaline, or about four milligrammes of the amorphous principle. This dose will appear perhaps somewhat exaggerated, but nevertheless, it has never produced untoward effect, my especial method of administering it having been communicated to the Société de Thérapeutique. I always prescribe it with care, from the beginning, by itself or in conjunction with an exclusive milk diet, this milk diet opening "a way for the action of digitalis." Objection is often raised to the cumulative effects of the drug, to its slow action and elimination, and hence other cardiac remedies have been advocated as substitutes, but I, myself, have never been able to find an equivalent to this marvellous remedy, without which the therapeutics of the heart would be impossible.

It is time to act against exaggerated views, and to proclaim in strong terms that the cumulative effects, the slow action, and tardy elimination of the drug are, so to speak, superadded qualities. I will say now and again that digitalis is a corrective of and provokes diuresis, thus becoming a safeguard, a shield to the organism. It must be given in large quantities, because it is just then that it cumulates and acts slowly. When you desire to put a patient to sleep, you inject into him at once a centigramme of morphia, and not in repeated doses. When you want to reduce a high febrile state, you must prescribe from 1 to 1.5 grammes of quinine at at once, and not the same quantities in repeated doses during the day. As is the case with quinine, digitalis and all other slow-acting medicaments are not generally given in fractional doses, since such medicaments are divided in the organism itself, owing to the slowness of their action and their tardy elimination. The method of employment of remedies which are rapidly eliminated, such as the bromides and the iodides, is just contrary to the one we have been just considering. You divide the doses, inasmuch as the system becomes often, and for a considerable time, under a marked influence of the drug. In regard to this point I will cite the case of an epileptic suffering from nocturnal attacks, who received, without any effect whatever, eight grammes of bromide of potassium in two doses in the course of the day, but who was completely relieved by two doses of 2.5 grammes each, one given late in the afternoon, and the other at night before the expected attacks.

Digitalis, therefore, must be prescribed in large doses in order to obtain rapid and good effects. My venerable teacher, Potain, has for a long time observed this method of employment, and I administer, like him, in cardiac affections one milligramme of crystallized digitaline at once. However, this, especially in pneumonia, is a maximum dose, and I would not advise you to go beyond it. I, for my part, will not follow the example of a physician of Bucarest, of Petrescu, who fearlessly uses from six to eight grammes of the infusion of digitalis. The innocuity of such colossal doses cannot be explained, unless we admit a poor quality of the plant employed.

For the next two days, and during which also I administer from 40 to 50 drops of the solution referred to, I do not employ any other remedy, nor even the subcutaneous injections of caffeine, because I am always afraid to give another drug whose effects may lessen or antagonize those of digitalis. Therefore, if the adynamia is profound, if the nervous asthenia marked, I do not hesitate to practise hypodermatic injections of ether or camphor, as these are undoubtedly efficacious against a threatening cardiac collapse. I am in the habit of using the following formula:

℞ Sterilized olive oil.....100 grammes,
Camphor..... 10 "

M. Sig. Inject the contents of a common Pravaz-syringe two to four times a day. These injections are not painful, especially if the liquid be injected as deeply as possible under the skin.

Under the influence of digitaline the ventricular systole is strengthened, the pulse becomes very strong, dyspnœa is lessened, the œdematous congestion of the lungs is averted, the bodily temperature lowered; diuresis is

rapidly established, and during a period of four or five days there is taking place an elimination of the toxic substances produced by the infectious disease. Under the power of the drug the arterial pressure is increased, an important consideration in a malady, which, like the grippe, well characterized, and, as I have shown in my researches, tends to produce vascular depression. If in the course of the malady, the indication makes its appearance again, even after the ingestion of the drug, I do not hesitate to re-administer this after the seventh or eighth day, but then in smaller quantities, about 20 or 30 drops, and without considering the presence of albuminuria a contra-indication as is generally wrongly held. In certain similar cases, digitalis diminishes considerably the amount of albumen, and in the infectious diseases, by provoking diuresis, it tends to remove the toxines, whose retention in the organism would be a serious cause of auto-intoxication.

In conformity with the views held at present, an important element must be taken into consideration in all the infectious diseases. I have already spoken to you of hepatic insufficiency. The liver is, in fact, more or less altered; the hepatic cells do not fully exercise their function in arresting or neutralizing poisonous materials, and these, therefore, find their entrance into the circulation. Yet, an auto-intoxication of the organism may be prevented by the kidneys as compensatory organs of the liver, eliminating a great part of the toxines which this latter organ has been unable to destroy. This explains why at this compensatory period the urine becomes highly poisonous, and why this urinary crisis is, as Buchard has remarked, "one of the safeguards of the organism." But the superactivity of the renal structure has its limits as well as its dangers; the constant passage of these toxic and irritant substances produces at last inflammation of the kidney, and the urine is then charged with albumen. Thus the insufficiency of the renal organs is dependent in these cases upon that of the liver, and we have now an albuminuria caused by a glomerulo-nephritis of infectious origin. You can understand then, that here again the object of the therapeutist would be to bring about a urinary depuration by provoking diuresis, and that the indication calls once more for the use of digitalis.

This hepatic insufficiency which plays an important part, often unrecognized in general and febrile diseases, must be combated by two kinds of medication: The one should be directed to enhance the activity of the liver and the kidneys; the other to remove all sources of auto-poisoning, especially that of the intestinal tract. The first indication is met with by the administration of *milk*, since this article of food is diuretic and through such action the toxicity of the urine is diminished; besides, milk contains sugar capable of being transformed into glycogen, and is likewise poor in salts of potash so often injurious to the economy. It is for this reason also that all food containing salts of potash, such as meat and especially broths, should be suppressed. *Intestinal antisepsis* should then be resorted to, and here comes into play the administration of salicylate of bismuth, naphthol, salol, betol or benzo-naphthol. I prefer the latter medicament in doses of 5 to 6 *cachets* of 0.05 gramme each, and I prefer it on account of its non-poisonous properties, its lack of taste, and of its slight diuretic effects.

Intestinal antisepsis must be rigorously practised in all infectious disorders, and especially in influenza, this pestilential malady *par excellence*, as termed by ancient authors. You must not, however, neglect the practice of *buccal antisepsis*, not only in the case of pneumonia, but even in the apparently least serious manifestations of the disease. Bacteriology has taught us that influenza is the resort of a great number of micro-organisms; and it has also been shown that the malady increases the virulence of such microbes. Finally, we have learnt that secondary infections are quite frequent. Now, we can do little against the primary infection; but we are to a certain extent the masters of secondary infections. In an individual suffering from gastric embarrassment, you will observe, after a few days, the development of a pneumonia which you have not foreseen and which you have no reason to fear. In such a pneumonia, the pulmonary affection follows its natural course, when suddenly all the symptoms are intensified, the expectoration becomes sanious and abundant, and you are finally met with all the signs of a pneumonia which has arrived at the stage of gray hepatization. What has occurred in such a case? A secondary infection has been superadded to the primary one. In this patient suffering from gastric disturbance, the pneumococci, normally found in the buccal cavity, have acquired a great virulence; a secondary infection has alighted, as it were, upon the primary disorder and the microbes of suppuration have rapidly completed their work. During an epidemic, in the course and at the onset of a grippal pneumonia, buccal antisepsis must not be lost sight of, and I have but to repeat here

what I have so often told you. To all your pneumonic patients, held under the grasp of influenza, a malady which markedly diminishes the vital resistance of the organism to the action of pathogenic germs, and which so prodigiously exalts the properties of these, you must order every day, and as often as possible, mouth washes and local applications to the deeper parts of the cavity with solutions of corrosive sublimate. Remember, that the *rôle* of the therapeutist does not only consist in curing (and alas! he does not always cure) but in foreseeing and preventing all complications that may appear threatening secondary infection.

I must yet speak of another medicament, *quinine*, whose employment is generally indicated in all grippal pneumonias, but I do not believe in the preventive properties attributed to the drug by certain authors. I am in the habit of prescribing the hydrobromate of quinine, which I consider superior to the sulphate, especially on account of its sedative effects, in dose of from 1 to 1.5 grammes in the morning, in three doses at intervals of half an hour, and this during the period of three or four days at the most. I have often said that this remedy, like digitalis, must be prescribed in large quantities. I have employed thrice daily *cold baths* as recommended by several authors, but I have not obtained good results. When patients have become agitated, it has not been my rule to follow this measure, energetic it is true, but certainly dangerous in a disease in which the heart is constantly being threatened.

Finally, in those cases in which the injections of camphor, ether and caffein appear to be insufficient to combat the adynamia and the nervous asthenia, I have recourse to the use of the *sulphate of strychnia* in doses of 3 to 4 milligrammes a day, either by the stomach, or according to the following formula:

℞ Distilled water.....10 grammes.
Sulphate of strychnine, 0.01 gramme.
M. Sig. Inject 2 to 4 half-syringefuls in a day.

It becomes evident that you must order this medicament in conjunction with other tonics, such as *Todd's potion*, although this is often abused. I, myself, prefer the *kola* preparations, whose tonic and stimulant properties have been pointed out since 1884, in the thesis of Monnet. The formula which I recommend is as follows:

℞ Tincture of kola.....
Tincture of coca.....aa 60 grammes.
M. Sig. A dessertspoonful, 2 or 4 times a day, in a cup of warm and sweetened milk or in a little curacao mixed with a little water. This is an agreeable preparation.

These, however, are accessory measures. Digitalis, quinine, the injections of camphor, ether or caffeine, intestinal, and buccal antisepsis, form the basis of the treatment of all grippal pneumonias.

I have not gone beyond the enumeration of all these therapeutic means, and know full well that I am far from having grasped the whole of such a vast subject, and that I have not spoken of the treatment of the complications. But I have endeavored to demonstrate to you that from a clinical, as well as from a therapeutic point of view, we only see in grippal pneumonias a diseased lung; that there is no such thing as an antipneumonic medication; and that we are satisfied with the application of compensatory therapeutics to which I have already referred, that is, by calling upon the healthy and compensatory organs that these may lend a helping hand to the diseased one. I have, in one word, endeavored to impress upon you the truth of this proposition:

In almost all pneumonias, especially in grippal pneumonias, the disease is in the lung, but the danger lies in the heart and nervous system.—Translated from *La Bulletin Medical*, February 14, 1892.

TETANOID CONVULSIONS IN AN INFANT. OPERATION; RECOVERY.

The *Centrall f. klin. Med.* refers to Dr. T-R. Ronaldson's case in which a healthy child, normally born, but with an uncommonly thick umbilical cord remained in perfect health until the ninth day, when on the eleventh day tetanus developed. On examining the umbilicus it was found black in color and very foul smelling. Symptoms of inflammation were not present. The convulsions occurred from time to time. During the intervals the child seemed to be well enough, and was able to take the mother's milk. The stump was washed several times daily with a sublimate solution, and every precaution was used to prevent a recurrence of the attacks without avail. On the twenty-third day the author performed excision of the navel, which was followed by a gradual disappearance of the seizures, they becoming less frequent from day to day, and at the end of the seventh week the attacks had entirely ceased, and the child was perfectly well. There were no micro-organisms found in the excised umbilical stump.—*Edinb. Med. Jour.*

PRURITUS.

℞ Resorcin (medicinal).....part 1.
Glycerin.....parts 2.
Water..... " 10.
M.

TUBERCULAR CARIES OF LUMBAR VERTEBRÆ—HIP DISEASE—MULTIPLE SINUSES—SPONDYLITIS.

By H. AUGUSTUS WILSON, M. D.,

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Delivered at the Jefferson Medical College Hospital.

Gentlemen:—I bring before you this morning the little boy upon whom Professor Forbes operated five weeks ago; a case in which there was a tubercular caries of the lumbar vertebræ primarily, and subsequently a tubercular hip-joint which was excised by some physician outside of the hospital. For some reason which will be explained the sinuses persisted, and on last Saturday I laid open the tracks, removed a portion of necrosed bone, and then stitched up the wound. The case at the time of the operation was of very great interest from the fact that there was a sinus just above Poupart's ligament, which seemed to indicate the presence of a Psoas abscess. On opening the sinus, however, it was found to lead directly to the hip-joint, and was not apparently connected with a Psoas abscess. This is of interest because it shows the various directions the sinuses in hip-disease will take. I now bring the boy before you to show you his present condition. He was taken off of the wire bed upon which he was placed after the operation, a few days ago. The wounds are still healing, but they show the characteristic appearance of tubercular granulations. You will observe on the left side a sinus which continues to ooze, and which is probably connected with a carious spine. The site of the operation is in a satisfactory condition, except at one point. You can all see the extensive cicatrization. The leg is in a good position, and is held so, I think, by bony union. The sinus in front is still discharging a very small amount of bone pus. I think from now on a conservative mode of treatment should be observed, for the sites of the dead bone are so inaccessible that it would be unwise to attempt to remove them. Our hope is that by the curative plan of iodoform emulsion the tubercular bacilli may be killed and the progress of the disease arrested.

TRAUMATIC OSTITIS OF HIP AND SYNOVITIS OF KNEE.

This boy you will remember was in our last clinic. You will doubtless remember his shocking condition. His appetite is now greatly improved; his general health also, and he has no pain. The cicatrization is proceeding satisfactorily at all points. We have obtained primary union throughout the wound except at the point of drainage, which I told you would be kept open to afford egress to the small amount of pus that must continue to form. The small bedsore over the coccyx has yielded to our treatment, which consisted of absolute cleanliness and removal of all pressure by the employment of the cotton ring. You can see the character of the union throughout the extensive incision. There has been a decided increase in the deposit of fat in the tissues, showing that our treatment has relieved the drain upon the system, and enabled him to build up. The temperature chart is decidedly improved, though it still zigzags between 99° and 100°, indicating that there is still some constitutional disturbance. The boy is in a good condition, however, as compared to his former condition, and as he further improves other measures for the relief of his affection will be considered.

SPONDYLITIS.

I propose during the balance of the hour giving an introduction, as I might say, to the subject of Potts' disease of the spine. I find that it is necessary to devote a short time as a preliminary to this important subject in order to make its principles rather more clear to you, so that you may understand its importance when cases are before you. Potts' disease is tubercular ostitis affecting one or more vertebræ tending towards a breaking down of the bodies of the vertebræ, thereby producing a peculiar kink or curvature of the spine. The external manifestations of this curvature are so grossly different from those of rotary lateral curvature that all that is necessary to call your attention to the distinction is to show to you these two specimens. In rotary lateral curvature there is no posterior or angular deflection, but a lateral deflection, manifesting itself by a peculiar bulging of the ribs upon one side and a regular deviation of the line of the spinous process, associated with rotation of the vertebral column. This specimen shows the character of the rotary lateral curvature with an elevation upon one side and a depression upon the other, with a rotation of the spinous processes in such a position that the ribs are thrown backward on one side. In marked

contrast observe the changes in this specimen of spondylitis. Here the bodies of the vertebræ are destroyed, and the weight above has caused a bulging of the spine posteriorly. In Potts' disease there is present what there is not in rotary lateral curvature, and that is a *destruction of the bodies of the vertebræ.* I cannot occupy time now by speaking of the nature of the disease further than to say that it is a primary tubercular ostitis rupturing into the joints and destroying the latter; the bodies of the vertebræ become soft, are pressed upon and yielding produce this deformity. There is no tubercular disease in rotary lateral curvature, while Potts' disease is a true tubercular caries of the bodies of the vertebræ. I have in a previous lecture dwelt upon the subject of tubercular ostitis in general, and as all I then said is true of the condition we are now studying, I will not repeat.

Now for the various names of Potts' disease. Just as in hip-joint disease I found it necessary that you should understand the various names by which the disease was designated, so now it again becomes necessary to call your attention to the synonyms under which Potts' disease is recognized. It was Perceval Potts who first accurately described "Some Forms of Paralyses due to Caries of the Vertebræ." He spoke of the impinging of the vertebral column upon the spinal cord as a result of this caries, and as a result of his elaborate paper his name was applied to the disease, as a tribute to his scientific and practical research. Before that, the affection was called hump- or hunch-back, gibbous spine, etc. Before Potts' time the ordinary bone-setters were practically the only ones who treated this condition, and as a result, the diagnosis was rarely accurately made, and no consideration was paid to the prevention of the deformity or its progress. From the time of Potts' first description in 1779 the treatment has necessarily varied very much. The other names of the disease are spondylitis, from the Latin *spondus,* and *itis,* meaning an inflammation of the vertebra. This term describes the pathology of the affection, and hence is a good name to use. It is also called tubercular caries of the spine. Other names are given to the character of the protuberance. The term *kyphosis* is given to the hump, and signifies merely a hump. Hence this name is rarely used in the study of tubercular caries of the spinal column because it is inadequate. I always deprecate the giving of a man's name to a disease, for the reason that it does not describe the pathological condition which is present. It is generally understood now that Potts' disease means tubercular caries of the spinal column. The correct term I believe is *spondylitis,* because it definitely tells what the disease is.

Now as to the causation of the protuberance. One of the clinical stand-bys in a clinical lecture has been the stick I show here, notched to indicate that the bodies of one or more of the vertebræ have been eaten away. Pressure exerted upon the top of this stick held vertically causes a bending of the column, and a hump is produced. Then, unfortunately, the clinical lecturers go further, and say that a straight stick applied to this bent stick as to a bent tree is the principle of the mechanical treatment of this condition. This is incorrect for mechanical reasons. It would be all right could we get our splints or braces around the spinal column itself, and if the spinal column were composed of one piece as the stick is. In caries we deal with softened ribs and with a softened set of costal cartilages; if pressure be exerted on these alone, there will be produced a yielding as is shown in this specimen. The ribs are pressed forward and the costal cartilages spread. If this will happen without support, will not the same thing follow if we try to bridge up the caries parts alone in the manner indicated? To press on these soft ribs will be to bulge them out without affecting the spinal column whatever. The spinal column is held up and the weight of the head borne not by means of guys of stiff material, but by muscles which pull down. The movements of the spinal column are resisted by muscular effort. In caries of the vertebræ, say in the dorsal region, all of the tissues above that spot, namely, the head and shoulders, are tending to cause kyphosis, and the muscles below are increasing this trouble by contraction. The rational treatment, therefore, would seem to be to remove this pressure. By lifting the superincumbent weight I can overcome the deformity in this stick. If I take this spinal column and put it in the upright position in which there is a curve produced, it is the head and shoulders which produce the curving. If, however, I can put it in such a position that there will be no head weight, there will be no kyphosis produced. Hence, the position of recumbency is necessary in the treatment of this disease, because in that position only is the affected part relieved of the superincumbent weight. I do not say that you must keep the patient in bed to do this, for as the course of the disease runs over two to five years such a procedure would increase the constitutional weakness of the patient. By

mechanical means we can *maintain the position of recumbency* and yet allow the patient to be around gaining the advantage of a outdoor life. If you adopt the principle that mechanical support to be thoroughly efficacious must have for its object the mechanical maintenance of the position of recumbency you will have a standard to guide you.

There are three forms of apparatus in use about which I shall speak. *First*, that which is applied to the patient's body below the seat of the disease only. *Secondly*, where a sort of bridging of the diseased portion is attempted. The apparatus supports above as well as below the site of the disease. Here there is a firm foundation and the tissue of the splint prevents the ribs from bending. The *third* form I believe to be the best and most rational, in that its object is the relief of pressure and immobilization, and it therefore maintains the position of recumbency. First and foremost there is, just as is the formation of any architectural structure, a good foundation. In taking the weight of the head and superstructure away from a caries of the spine it is necessary to have a good foundation upon which to rest the apparatus and the load it is to carry. This apparatus is one of the forms employed; it can be made out of leather, felt, steel or other material, must fit thoroughly and comfortably the hips so as to prevent any slipping. Then, having secured a foundation, a couple of steel bands are used to carry the foundation up to the point where the superstructure can be applied. Then the apparatus is used to lift the weight of the head and shoulders from the diseased parts of the column. By means of a minerva or collar the head and chin rest upon the foundation and not upon the spinal column. A jurymast will accomplish the same thing. It consists of a rod carried over the head with a sling applied so that the same object may be accomplished. Thus various methods may be used, but what I wish is that you should understand the principle and ignore the material of which the apparatus is made. In such apparatuses the position of recumbence is maintained for the reason that the spinal column is allowed to maintain its normal position free from weight. There is also a freedom from mobility. If this position is accomplished and maintained, you can have a cure just as you can in any other form of tubercular bone disease. Rest and immobility are necessary in all these cases. Osseous recovery in tubercular-spinal disease can be secured if the case is treated in the proper manner. Other forms of apparatus adopt the crutch form of support. There the weight rests on the axillæ, and the weight of the shoulders only is taken off. It is wonderful how far you can elevate the shoulders while the head sinks down, showing that the weight of the head is not removed. An immense amount of extension of the shoulders can be made before the weight of the head is removed. One of the most difficult things in the treatment of these cases is the securing of a suitable foundation. You can see how small the pelvis is in a child. If necessary the foundation may be extended down the legs in order to secure firmness. One of the methods often resorted to in the treatment of caries of the spine is the application of the plaster of Paris bandage. Professor Louis Sayre, of New York, has rendered a lasting service by the introduction of the plaster of Paris jacket in this disease. He advocates a jacket which is applied by him with perfect satisfaction in most cases. But the trouble is that the jacket has apparently been looked upon as possessing curative properties in itself, and hence has often not been properly employed. Plaster of Paris of itself I need hardly assure you has no curative effect; it only acts by mechanical action alone. Only last week a profound case of Potts' disease was sent to me in which the jacket was so short and loose that it slipped over the pelvis, and the doctor very ingeniously had applied straps over the shoulders to hold it in position. The weight of the apparatus was six pounds, and this was added to the shoulders already bearing too much weight. I could only account for the use of such a contrivance by thinking that the physician was imbued with the idea that the plaster of Paris must have been curative in itself, it certainly did not exert any beneficial mechanical action. Plaster of Paris as used by Professor Sayre is an entirely different matter from the plaster of Paris as used by a large number of physicians. Professor Sayre first suspends the patient so as to secure the position of recumbency. Then he applies first of all a good foundation. He presses in around the waist and on this applies a proper amount of superstructure, and applies it for mechanical reasons to accomplish a mechanical result. We can apply plaster of Paris to a broken forearm in the same manner as it is often applied to many cases of spinal disease, by merely applying the plaster above the fracture and not below. If the apparatus is only carried to the seat of disease we are apt to overlook the fact that the head is an important factor in the development of the deformity.

One of the methods of knowing that your object has been attained is by seeing that the child's symptoms are overcome by your apparatus, and unless this be accomplished you may be sure that its use is harmful or at least is doing no good.

COMMUNICATIONS.

A YEAR'S WORK IN MINOR SURGICAL GYNÆCOLOGY AT THE KENSINGTON HOSPITAL FOR WOMEN.*

By CHARLES P NOBLE, M D.,

Minor surgical gynæcology, embracing the surgery of the pelvic floor, vagina, bladder, and uterus—excluding hysterectomy—has not received much attention at the hands of recent writers. This is partly because the attention of gynæcologists has been devoted to the marvellous strides which have been made in abdominal surgery, and partly because this field of work is not so brilliant as that of abdominal surgery. It is true that minor gynæcological surgery is not brilliant, but it is very important, and it seems to me that it is in some danger of being neglected by the surgeons of to-day. This fact has led me to report my last year's work in minor surgical gynæcology at the Kensington Hospital for Women, and to make certain observations on the various operations named. The following operations have been done:

Removal of vaginal cyst (post cervical)	1
Clitoridectomy (nymphomauia)	1
Excision of carcinomatous nodules (secondary after removal of breast)	3
Uterine polyps (removed)	2
Lipoma (removed)	1
True pelvic abscess (drained after exploratory section had excluded disease of appendages)	1
Atresia of vagina (divided)	1
" " vulva "	1
Cancer of cervix—curretting (death fr m uræmia)	1
Amputation of cervix—cancer, 1; procidentia, 2	3
Anterior colporrhaphy (oval)	1
" " (Stotz)	2
Perineorrhaphy (Hegar's)	1
" (Emmet's)	17
Trachelorrhaphy	6
Dilatation and curetting	18
	60

One death occurred in a case of advanced carcinoma of the cervix, which was thoroughly curetted by Dr. Kelly. Death followed on the eighth day from "cancerous uræmia." This poor woman had been insane for some weeks—the insanity being due supposedly to absorption of septic matter from the decomposing cancer. The operation was done with the hope of relieving this, and also to get rid of the necrotic mass. The other operations in the report were done by myself. The technique employed was quite similar for all cases. The patient's bowels were well cleared out the day before the operation, and moved by enema the morning of the operation. In addition, the patient had a full bath and a sublimate vaginal douche. Operations were done under ether-anæsthesia in the dorsal position, with the Robb leg-holder and Kelly perineal pad in use. The vulvar region and vagina were well scrubbed with soap and water, the vulvar hair was shaved, and the parts were well douched with sublimate solution. In this way an aseptic field was secured; all operations were done under irrigation with boiled water, sponges not being used. This technique is a little troublesome, but the results secured amply compensate for the outlay of time.

I have made it an invariable rule to *re*-examine all patients before beginning the operation. This can be done most thoroughly when the patient is anæsthetized. If the uterine appendages are found inflamed and adherent, any proposed operation upon the uterus is abandoned. I believe this to be the only safe rule of practice.

For sutures, silk, catgut, and silkworm-gut have been used. For general purposes I like silk; but it should not be used where the sutures cannot be removed in one or two weeks. Catgut I have found very useful for sutures having but little strain to bear, as, for instance, the upper sutures in perineal operations. Silkworm-gut has the advantage that it is non-absorbent; hence it is to be preferred where sutures must be left in a long time, as, for instance, in the cervix, when the cervix and perineum are repaired at the same sitting. It has the disadvantage of being stiff, which property makes it somewhat hard to remove, and gives the patient some pain. After operations the vagina is carefully dried, a pencil of iodoform (25 grains), together with a strip of iodoform gauze, is introduced, the vulva is sprinkled with a powder of iodoform (1 part) and boric acid (7 parts), and then a cotton pad is placed over the vulva—held in place by a T-bandage. For perineal operations the urine is drawn for two days; after which the patient is allowed to urinate. The gauze is removed after forty-eight hours; after which a sublimate douche (1 : 2,000) is given once daily. The bowels are moved on the second day and regularly thereafter. An abundant soft diet is permitted. The external sutures in perineal operations are removed about the eighth day; the internal sutures a the end of the second week. When the cer

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vix has been repaired at the same time, the cervical sutures are removed at the end of the third week or even later. One should err on the side of leaving the sutures in long rather than that of removing them early.

Patients having perineal operations are permitted to sit up in two weeks; those having a curetting, in three or four days; those having a trachelorrhaphy, in a week, etc.

The secret of success in plastic surgery is good asepsis, and careful, painstaking, and accurate denudation and suturing. I have never failed to secure good union, which has always been primary throughout, with two exceptions—one stitch-hole abscess and one small hæmorrhage (hæmatoma).

DILATATION AND CURETTING.

Within the past ten years professional opinion concerning these operations has fluctuated widely. Before the antiseptic era curetting was considered a dangerous operation. Its danger at that time I feel satisfied was due partly to lack of antiseptic measures, and partly to bad diagnoses. At that time our knowledge of the diagnosis of chronic salpingitis was very imperfect, and many accidents (peritonitis) resulted from operating on the uterus when the tubes contained pus or other septic fluid. Since the antiseptic era in the hands of men capable of making a diagnosis of uncomplicated disease of the uterus, and of excluding chronic pelvic inflammation, these operations have been done with impunity. Of late, the legitimacy of the operations has been questioned by Dr. Joseph Price, on the ground that many cases of salpingitis and pus tubes have come under his care in which dilatation and curetting has been done. This fact is no argument against the legitimacy of the operations, nor against the fact that, when properly done in uncomplicated cases, the operations are perfectly safe and free from danger,

Did the women seen by Dr. Price (and by others, including myself) have the tubal disease before the uterus was dilated or curetted? Were the operations done under rigid asepsis? I believe that blunders in diagnosis and blunders in asepsis should bear the blame in these most unfortunate cases, and not legitimate surgery. In my own hands no such untoward results have occurred. On the contrary, under the strict limitations laid down, my confidence in the value and safety of the operations increases as my experience grows.

DYSMENORRHŒA.

Three cases of dysmenorrhœa, due to partial development of the cervix, with anteflexion, and characterized by "cramps" during the flow, were treated by dilatation. Dilatation in this class of cases has always given good results. The cause of the "cramps" is a poorly developed cervix with a narrow canal, whose calibre is further lessened by the anteflexion.

A broader experience has induced me to use the dilator for dysmenorrhœa much less frequently than formerly. I consider it absolutely contra-indicated if there be tubal inflammation, and believe that it is of little use in relieving pain, unless the latter be distinctly intermittent and cramp-like in character.

The pains accompanying menstruation due to inflammation of the uterine appendages, or of the uterus, or due to a depressed state of the blood, with pelvic neuralgias, are not benefited by dilatation, and in such cases it should not be done.

ENDOMETRITIS.

Fifteen cases of uncomplicated endometritis have been treated by dilatation and curetting. Nine of these were cases of fungoid endometritis with resulting uterine hæmorrhages. I believe that this procedure best meets the indications in all cases of uncomplicated *chronic* endometritis. By removing the thickened portion of the diseased endometrium and providing a freer vent for the uterine secretions, most cases of endometritis can be cured promptly, and the remainder are much improved. The number of cases in which it is necessary to make intra-uterine applications is thus much reduced, and these women are saved the necessity of undergoing a prolonged course of painful intra-uterine treatment. By promptly curing women with chronic endometritis another important point is gained—the disease is cured before it spreads to the tubes.

The results in my hands have been most satisfactory in cases of fungoid endometritis, especially those of short duration, resulting from abortions. Cases of chronic endometritis with purulent leucorrhœa have been most intractable, and in these cases it has been necessary to make weekly applications to the endometrium (by means of the applicator) of pure carbolic acid, Churchill's tincture of iodine, or a saturated solution of chloride of zinc for some weeks *after* the curetting. I wish to call attention to the small number of cases of uncomplicated endometritis in this series. Omitting the fungoid cases, there were 6 out of 128 women admitted to the hospital. This is about the average in my practice.

In fungoid endometritis I have found the curette so valuable, and other methods of treatment (in marked cases) so futile, that I am unable to understand how these gentlemen who oppose the use of the curette treat these cases. The only other resort is electricity; but the curette will accomplish in a few minutes what it requires weeks or even months to accomplish by electricity.

The results obtained by the curette in uncomplicated endometritis are so good that of late, forgetting the teachings of past experience, certain operators have proposed to treat cases of endometritis complicated by tubo-ovarian inflammation in the same way. It seems to me that careful men cannot protest too strongly against such treatment. In the first place, the danger of setting up fresh salpingitis and peritonitis is acknowledged (except by the few) to be great; and in the second place, should the endometritis be cured (which is doubtful because of pelvic congestion kept up by the tube-ovarian inflammation), the graver diseases of the appendages remains. The wiser plan, if the appendages are diseased, is first to remove them, and then actively treat the endometritis; or if the appendages are but slightly diseased and do not require ablation, to treat the patient by applications of iodine to the vaginal vault, and the use of glycerine tampons, at the same time using every measure to improve the local conditions by general medication.

It happens not infrequently that when the inflamed uterine appendages are removed, an endometritis is left which causes the patient some annoyance. These cases are often reported by those hostile to modern surgery as showing that the abdominal section has failed to cure the patient. These gentlemen have a mental strabismus, and do not see that the section has accomplished the end aimed at, the ablation of the diseased uterine appendages. Whether this alone will cure the patient depends upon whether the particular patient has any other disease. If she has an endometritis, this must be cured; if anæmia, or indigestion, or malnutrition, these must be treated.

I wish to protest against the view that endometritis as a rule causes much distress, except the annoyance of leucorrhœa, unless it induces hæmorrhage. Where women having endometritis suffer much pelvic pain, and are semi-invalids, the cause of the pain or invalidism is to be sought elsewhere—in the uterine appendages, or in the vital organs, or blood state. It is a narrow man who attributes all the symptoms complained of by women to disease of the pelvic organs, and who forgets that women have an unstable nervous system, easily influenced by morbid conditions of the general economy.

In discussing endometritis it should not be forgotten that other conditions besides endometritis can cause a discharge from the uterus. Whatever will cause congestion of the uterus will cause uterine discharge. For example, subinvolution, constipation, feeble heart, lazy habits, malnutrition as from phthisis, erotism, etc. Treatment addressed to the causative disorder will stop such uterine discharge. This class of cases calls for no treatment of the endometrium.

STOLZ'S ANTERIOR COLPORRHAPHY.

This operation has been done twice during the time covered by this report. It is especially adapted for cases of procidentia in which cystocele is a marked feature. The cases have been treated with most gratifying success by amputating the cervix above the vaginal junction, doing Stolz's operation on the anterior vaginal wall and Emmet's operation on the perineum, the combination of operations being done at one sitting. I have had but one failure in my experience. This was in the person of a woman having complete procidentia, whose tissues had undergone marked fatty degeneration.

PERINEORRHAPHY.

One Hegar's operation was done on a woman having a patulous introitus. Seventeen operations were done after the manner of Emmet for injuries to the pelvic floor, involving laceration of the levator ani muscle and loss of pelvic support.

It seems strange to me that men who are familiar with the anatomy of the pelvic floor, and with the nature of the injuries it sustains during labor, can differ so widely concerning the nature of the operation required to repair the injuries sustained. Not to consider the lacerations extending into the bowel, there are two general classes of lacerations of the pelvic floor:

1. Lacerations involving the vulvar commissure, and extending scarcely to the vagina, scarcely beyond the plane of the hymen. These are the insignificant lacerations, which at most give rise to a gaping *introitus vaginæ*, but which involve no appreciable loss of pelvic support. Such lacerations are median, and involve no very important muscular structures. The bulbo-cavernosus and the transversus perinei muscles may be divided, but the laceration does not extend far enough up the vagina to reach the levator ani.

Usually it is indifferent whether such lacerations are closed or not. The result to be gained is scarcely sufficient to compensate a woman for submitting to a secondary operation. In my opinion, however, even such lacerations should have a primary perineorrhaphy. If a secondary operation is done, the Hegar operation best meets the indications. The flap-splitting method will answer, but it leaves an ugly fold of tissue at the orifice of the vagina.

2. Lacerations extended along the vagina, and involving more or less of the levator ani muscle or muscles and the deep fascia, according to the extent and depth of the lesion. Such tears, as a rule, not only involve the commissure of the vulva, as in class 1, but also extend up the vagina, aud without exception extended up one or both sulci. They are never median. The tough pelvic fascia seems to deflect the laceration to one or other side. But whatever the explanation, it is a fact that deep, extensive lacerations do not extend up the middle line of the vagina, but up one or both sulci. Sometimes the injury is wholly in the vagina, and the commissure of the vulva remains intact. Hence these tears are Y-shaped when the commissure of the vulva is involved and the tear extends up both sulci. They are Y-shaped when the commissure is involved and the tear extends up one sulcus (one arm of the Y is not represented). And they are V-shaped when both sulci are involved and the commissure escapes (the leg of the Y is not represented). The principal tissues involved in the injury are the levator ani muscle or muscles and the deep fascia. The injury extends two or three inches from the plane of the skin perineum. As is well known, pelvic support depends upon the integrity of the levator ani muscles and the pelvic fasciæ; hence the loss of support resulting from the injury is in direct ratio to its extent. When the lesion is extensive, the bladder, bowel, and uterus prolapse.

A very careful and somewhat extensive study of this subject from the clinical side has convinced me that the foregoing propositions represent the facts in the case, and are not theoretical. I believe that the reason certain gynæcologists of prominence do not accept this pathology is because they do not see much of obstetrics, and they have not studied the nature of lacerations immediately after labor. Anyone can convince himself of the truth of the foregoing statements by studying recent lacerations.

(For the sake of completeness, submucous laceration or over-stretching of the levator ani muscle may be called class 3.)

For the cases embraced under class 2, no operation will yield such results as the Emmet operation. The important lesions are in the sulci of the vagina, and can only be reached by denuding aud suturing the sundered tissues in the sulci. As a means of narrowing the vagina it has the further advantage of making use of the natural folds of that canal. The walls of the vagina fold upon themselves in such way that the lines of contact in transverse sections make the letter H. The sulci of the posterior wall represent the lower half of the legs of the H. It will be noticed that the walls of the sulci lie naturally together, so that, if they are denuded and sutured, the parts come together surface to surface. This is a very positive advantage in securing strong union, in addition to the advantages of raising the posterior wall of the vagina against the anterior, and of making a new *mediate* attachment of the vagina to the levator ani muscles.

I need not dwell upon the advantages possessed by the operation in cases of well-marked rectocele, in which the sulci are very deep. In no other way can the rectocele be so well rolled into the vagina.

My experience with the operation embraces some fifty cases. The results have been uniformly good, with one exception—the case of procidentia already referred to.

The other operations which are recommended for the cure of this class of lacerations are the median operation of Hegar (or some slight modification of it) and the flap-splitting operation of Tait.

Median operations are based upon the theory that the injury sustained is rupture of the perineal body, and that the operation is to restore this body. Time will not permit me to discuss this question *in extenso*. The nature of the injuries has been considered, and they are lateral, not median. The old theory of the nature and function of the perineal body has been disproved by Emmet, whose views I accept; hence it appears to me that the indifferent results secured by median operations are due to the fact that they are based on a false conception of the anatomy and of the injuries of the pelvic floor.

The advantages of the flap-splitting method are even less than those of the method of Hegar. In the rules laid down for performing the flap-splitting operation, we are told not to make the incisions deeper than a half-inch (from the surface of the skin perineum); that is to say, lesions situated further up the vagina than one-half an inch from the skin surface of the perineum are not

affected by this operation. Inasmuch as the entire levator ani muscle lies above this plane, it is evident that the Tait operation is worthless in the class of lacerations under consideration. The Tait operation accomplishes just about what the old Baker-Brown episiorrhaphy did—it narrows the orifice of the vulva.

What I have said about this operation is based upon the anatomical considerations involved and upon the results obtained by a prominent professor in this city. At least twelve patients who have been operated upon by him have been seen by me at the clinic for diseases of women at the Northern Dispensary. All had a narrow vulvar orifice, and all had more or less rectocele, with deficient pelvic support, and the symptoms complained of before operation. My personal experience embraces one case, which was sufficient to demonstrate to me the lack of anatomical basis in this operation.

TRACHELORRHAPHY.

Trachelorrhaphy was done six times. Experience adds to my appreciation of the value of this operation in appropriate cases. I am satisfied that the dangers and failures to achieve good attributed to it by some operators depend upon poor judgment in the selection of cases.

Either insignificant lacerations are repaired or lacerations complicated by inflammation of the uterine appendages are operated upon. In the first case the laceration caused no symptoms, and its repair relieved none; in the second, if the patient escaped a peritonitis as the direct result of the operation, she continued to suffer from the morbid condition of the appendages.

SUPPOSITORIES FOR CHRONIC PROSTATITIS.

For chronic prostatitis, Oberlander recommends the employment of a suppository containing:

℞ Iodoformi.....gr. vij ss–xv.
Solve in
Ol. amygdal. dulcis.....q. s.
Adde
Ol. theobromæ.....q. s.
—ut ft. suppos. no. x.
S. One to be introduced at night following an intestinal evacuation.

The oil of sweet almonds increases the absorbability of iodoform. The proportion of iodoform in each suppository is slowly increased from three-quarters of a grain to a grain and a half. In susceptible individuals larger quantities may occasion toxic symptoms.—*Deutsche med. Wochenschr.*, No. 53, 1891, p. 1435.

ARTIFICIAL FEEDING OF INFANTS.

By WM. A. TREMAINE, M. D.
PROVIDENCE, R. I.

Artificial feeding of infants demands our serious consideration. We have, as Dr. Meigs puts it, two ways of artificial feeding, one empiric, the other scientific, and the physician is compelled every day to choose between the two. If he follows the first method there is a wide latitude, with a possible hope of favorable result at the end. Scientifically considered, it is desirable to approximate the composition of human milk.

As the nursing baby takes milk from its mother it is germ free. This result is easily obtainable. Much more stress has been laid upon the method of sterilization than the preparation of the milk, and we have often left out of sight what is certainly of as much importance as the simple steaming. Milk sterilization is certainly becoming a recognized principle. The method of steaming is probably so familiar to us all that it needs but passing mention. It has been claimed by some writers, that the milk during this process becomes "devitalized," but how this rather vague claim can be established is uncertain. Up to the present date probably the most reliable analyses of mothers' milk are those quoted by Rotch in *Keating's Encyclopedia*, of Forrester, Meigs, Harrington and others. In these tables as a mean result the albuminoids are just at 1 per cent., or possibly at one and two-tenths of one per cent. Dr. Meigs stated nearly ten years ago that human milk never varied much from 1 per cent. of albuminoids, and that he has never seen any reason to recede from this statement. Many other analyses have been made placing the percentage at a much higher rate, but according to the best authorities these analyses are unreliable. In cow's milk albuminoids range from 3 to 4 per cent. Without dispute cow's milk then needs dilution in order to approximate the amount of albuminoids in breast milk. It makes but little difference what the diluent is, providing the dilution is accomplished. Water, barley water, lime water can be used indifferently as regards the formation of the curd.

Mother's milk is slightly alkaline; cow's milk is slightly acid, and personal experience has taught me that the degree of acidity varies much. Between Meigs, Keating and Rotch there has been much difference of

* Read before the Providence Medical Association, February, 1892.

opinion as to the means to be used for changing this normal cow's milk to resemble the slightly alkaline mother's milk. Dr. Rotch used only $\frac{1}{16}$ lime water of the total volume to accomplish this result. Meigs recommends $\frac{1}{4}$ of the total volume, and says his clinical experience will bear him out in his statement. Keating very justly remarks that when you consider that in a pint of lime water there are only 11 grains of lime, then two tablespoonfuls would only contain about one-third of a grain. Can this be sufficient to correct undue acidity or to supply lime to the tissues? Roughly stated, Keating's plan is to add to the milk bicarbonate of soda and potash with chloride of sodium in the form of a tablet, the whole to be afterwards steamed. Rotch recommends steaming the mixture first, and adding the lime water.

Does this procedure carry out the principle of antisepsis? We practically add to a supposed sterile fluid a certain quantity of liquid which may have been exposed to the atmosphere for an indefinite time.

The lime water cannot be added before steaming, because the temperature of 212° F. would precipitate the lime. When it is added before steaming, the milk will often turn a light brown or reddish color. This result I have obtained myself where the directions were not perfectly followed. Dr. Harrington explains this as the action of the lime water upon milk sugar at the steaming temperature. He adds, however, that at the beginning there is a slight alkalinity which disappears entirely at the end of the operation, so that the mixture is rendered sterile but not alkaline. Keating mentions some very interesting experiments regarding the effect of lacto-phosphate of lime on the curd of cow's milk. Briefly stated, he added hydrochloric acid to two portions milk; one containing $\frac{1}{2}$ grain of lacto-phosphate of lime, and the other nothing but the pure milk.

In the first case the resulting curd was smooth and creamy, and in the second case, it was lumpy and irregular. Repeating these tests my experience was unsatisfactory until the cause of failure became evident. Fresh morning's milk tested immediately showed corresponding results, while milk which had been standing all day, and was perceptibly acid, showed but little difference in the curd. This seems to emphasize the caution to sterilize as soon as possible after milking. The source of the milk as we know is of vital importance. Cows fed on brewery grain or silo will yield milk much more acid than those fed in the ordinary way.

One writer gravely remarks that filtered water is used ordinarily in the preparation of lime water, not boiled or distilled water. My experience is that with most apothecaries in this city aqua Pawtuxensis is used to answer all requirements. (Pawtuxet River water is our only supply, and decidedly not germ free.)

Brush, in the *New England Medical Monthly*, questions the use of commercial sugar of milk, and says that one of the faults of the physiological chemist is that he makes no distinction between a substance existing in a natural condition and that substance eliminated and isolated by chemical means. Thus the sugar of milk of commerce and the sugar of milk as it exists in that fluid are regarded by chemists as one and the same thing. This he thinks is not the truth. The sugar of milk in that fluid is all assimilated while the milk sugar of commerce when added to baby food is eliminated both by the kidneys and the bowels. He says he never found sugar present in the urine or fæces of nursing babies, but in three cases of infants fed with mixtures containing commercial milk sugar as recommended in Meigs' mixture he always found sugar in the urine and fæces by Keating's test. He suggests a return to the use of cane sugar. Meigs uses $17\frac{3}{8}$ drachms to eight ounces of the mixture. It would seem as if the amount in Meigs' mixture was rather excessive, but up to the present date the use of milk sugar seems to be the most reliable.

Regarding the fatty matter, the average is about 4 per cent. both in cow's and mother's milk. After dilution the proportion of fat in cow's milk becomes diminished. This proportion must be restored by the addition of some fatty matter, preferably cream. The cream from fancy cattle, Ayrshire or Alderney, is apt to be too rich in fats. The ordinary mixed herd milk is not so apt to vary in percentage. The centrifugal cream of which Dr. Rotch speaks (20 per cent. fat, diluted $\frac{1}{4}$ or $\frac{1}{3}$) is probably available only in the larger cities. Frolowsky has shown that the activity of the stomach's growth is very great in the first quarter of the first year, very slight in the second quarter, and moderate in the last half of the year. The weight of the child seems to be of more importance in calculating the requisite amount of food necessary, rather than the age. One-hundredth of the natal weight plus 1 gramme for each succeeding day for the first month is the rule suggested from the investigations at the Children's Hospital in St. Petersburg, and seems to be recommended by most writers on

this subject. Thus for a baby weighing 7½ pounds you would give one ounce of food and add 15 grains for each succeeding day during the first month. From this basis Rotch devises a schedule giving amounts and intervals of feeding for ages from birth up to ten months. This schedule is subject to great variation. Dr. Rotch cites a case under his care of an infant for six weeks whose general development and weight corresponded to one of 12 weeks, so that it was evident that two ounces of food, the usual allowance of food so far as the age was concerned, was not enough, and its weight indicated a gastric capacity of four ounces which it took and digested easily. In institutions sterilization of milk has gained great credit. In private practice it is not always so easy to bring mothers to a proper understanding of its value and importance. In the first case the patients are under absolute control. Exposure of the milk at the continued high temperature certainly renders it safe as regards germs, thus far we accomplish a great deal. My individual experience has taught me that preparation of the mixture itself as regards alkalinity and tissue formation is equally as important.

DISCUSSION ON PHAGOCYTOSIS AND IMMUNITY.*

At the Pathological Society of London, March 15th, 1892.

By M. ARMAND RUFFER, M.D., Oxon.

When beginning their remarks on immunity and phagocytosis Professor Burdon Sanderson and Dr. E. Klein stated that they could not accept Professor Metschnikoff's views. I will imitate their candor, and define my position in the same manner, by stating at once that I accept Metschnikoff's theory in its entirety.

Not one of the speakers has explained what he means by immunity; and surely this is the first point to decide. Immunity from a given disease means freedom and exemption from that disease. As far as I am aware, there is no animal, whether naturally resistant or protected by artificial means, which cannot be killed by the introduction of a specific microbe, provided a sufficiently large dose be used. To talk of an animal being immune against a given microbe is to speak of something which does not exist, and, although I must confess to having used the word myself, I would in future rather talk of animals naturally resistant and artificially protected.

Now when a naturally-resistant or artificially-protected animal is inoculated with a virus, I believe that the destruction of the micro-organisms in that animal is accomplished by the amœboid cells, which, for the sake of convenience, we will call phagocytes. I am not aware that Metschnikoff, or any of his pupils, ever said that this was the only cause of the increased resistance of such animals. Metschnikoff certainly never said so, but in his writings and in conversation he has simply stated—and indeed proved—that the process of phagocytosis was *one* of the most important factors in the acquired or natural resistance of a given animal against a given micro-organism.

Dr. Woodhead has already stated what we know of the origin of phagocytes, and I would not enter into the discussion of this question were it not that I must make a personal explanation. I have not said anywhere that *all* microphages, epithelioid cells, etc., were derived from leucocytes; what I have said is that in the cases I have observed the macrophages were derived from small lymphocytes. Were any proof necessary that such an origin of plasma or epithelioid cells is of no infrequent occurrence, I would point out that the development of these cells can be seen in the intestines of various animals, where they wander into the epithelium layer; that they have been found in the blood vessels; that when vermilion is injected into the veins of an animal, similar large cells seize on the powder circulating in the blood and carry it into the neighboring tissues—into the medulla of the spleen or alveoli of the lungs, for instance; that no such cells are present in the alveoli of a newly-born guinea-pig until they have been attracted there by some kind of noxa; and, lastly, that in invertebrata the transformation of an amœboid cell into a fixed cell has actually been followed day by day in the living animal.

Let us, however, pass at once to what happens when wandering cells have taken bacilli into their interior; for there can be no doubt that leucocytes have that power, and that the organisms contained in cells undergo some kind of destruction. That is a matter of observation which everyone can notice for himself who possesses a good lens, a drop of frog's lymph, and a few anthrax bacilli.

In the first place, see what happens when a protected or non-protected animal recovers from an infectious disease, or even when it dies after having resisted the malady for a considerable time. In all cases which have

*Continued from issue of Reporter of April 2d.

been studied up to the present, phagocytosis is a well-marked phenomenon. Slight, or even absent, when the animal has no powers of resistance against a given microbe, it increases with a more resistant animal, or when an animal has been artificially protected, and reaches its maximum when the disease is essentially chronic, as in leprosy and tuberculosis. Lately I have been studying human pneumonia from this point of view, and I can safely say that the human lung in this disease exhibits, in their exquisite forms, all the phenomena of phagocytosis.

Dr. Klein, in his able criticism of Metschnikoff's theories, lays special stress on the fact that, in several instances, the process is reversed, and that the leucocytes are destroyed by the bacteria, and not the bacteria by the leucocytes. This he considers a fatal objection to Metschnikoff's theory. As far as I am concerned, I may state that, in almost every one of my papers, I specially mentioned that a large number of amœboid cells perished in the fight. I have shown this to take place in the healthy rabbit's Peyer patch, in the diphtheritic membrane, in actinomycosis, in tubercle, in *charbon symptomatique*, etc.

I will meet Dr. Klein on his own ground, and take as examples two of the very diseases which he himself has mentioned as proving the fallacy of Metschnikoff's theory —namely, leprosy and tubercle. In many particulars these two diseases resemble each other strongly, for both are caused by a hard resistant micro-organism, and, pathologically, both are characterized by the fact that the micro-organisms, whenever present, set up intense inflammation.

Let us make a section through a leprous nodule, and stain it in the usual manner with logwood and carbol-fuschine. I need not enter into the description of the epithelioid and giant cells always to be met with in leprosy, but at once examine the processes taking place in these cells. In some cases such cells, when crammed with bacilli, undoubtedly die, and this death is indicated by the degeneration of their nuclei, the vacuolization of the protoplasm, and the apparent proliferation of the characteristic bacilli in the cells. That is one side of the picture, but let us look at the other side. In some of the cells the bacilli lose some of their definite outline and fuse together into a hard, solid, resistant mass, in which no structure is discernible even when use is made of the most delicate staining reagents and the highest powers at our command. In a later stage this hard resistant mass gradually breaks up and loses its power of retaining staining matter, until nothing is left in the cell but a clear space, which may be either a vacuole, or possibly a kind of membrane with which the bacilli have surrounded themselves. On the one hand, therefore, we can follow the victory of the bacilli over the cells, and, on the other, we have that of the cells over the bacilli. True, in the large majority of cases of leprosy, the bacilli gain the victory, but we are not justified in thinking that the chronic character of the disease, which may last for months and years, is due to the way in which amœboid cells incorporate the bacilli and destroy a large number of them? Unfortunately, the bacillus has means of defence of its own, and thus frustrates the beneficent endeavors of the cells.

It is an admitted fact that in cases of tuberculosis bacilli are often found in epithelioid and giant cells, and there is not the slightest doubt that these cells frequently succumb in the fight. Signs of degeneration are found in microphages, mono-nucleated, epithelioid, and giant cells, with a frequency which can leave no room for doubt. But what is not so easily observed is the other side of the fight, in which the bacilli perish. Metschnikoff has shown that signs of the encapsulation, decay, and death of the bacilli are of the most frequent occurrence in the giant cells of tubercle, and more especially in the giant cells of those animals which exhibit a strong resistance towards the bacillus of tubercle. In man, indeed, such forms of encapsulation are met with in the more chronic forms of tubercle, such as old scrofulous glands or calcified nodules in the lungs. In many cases of tubercle, therefore, the bacilli prove too strong for the amœboid cells, but that in many others the cells are victorious is proved by the frequency with which cured tuberculous lesions are found at the *post-mortem* examination of patients dying from some other disease. As Dr. Klein has said, in these diseases a great many of the leucocytes perish, but he might have added that the destruction of the bacilli is even more marked than that of the cells.

I am willing to allow the accuracy of Dr. Klein's experiment, when, on injecting a quarter or half a syringe of fluid containing anthrax spores or anthrax bacilli, he finds the anthrax bacilli in the blood a few minutes afterwards. Indeed it would be wonderful were it not so, for the frog's phagocytes are able to arrest a certain number of bacilli, but not an immoderate number; they will arrest enough bacilli to kill a mouse, but not the number of micro-organisms

which would kill an elelephant. And similiarly with vermilion. In my experiments I injected one drop of saline solution holding vermilion in suspension, and found that it was absorbed through the agency of leucocytes. Had I injected a quarter or half a cubic centimetre, the vermilion might possibly have penetrated directly into the blood; but I hold that it is not a satisfactory experiment to inject into the lymph cavity of a frog a large quantity of fluid, when the object in view is to study the absorption of solid particles.

In a former paper I have shown that in animals exhibiting some resistance against the bacillus of Chauveau, the disease was strictly limited to the point of inoculation and its immediate neighborhood. When, however, from any cause, physical or chemical, the amœboid cells were prevented from approaching the virus, the disease became general and the animal died. Dr. J. H. Walker and myself have recently obtained one more confirmation of this law, as shown by the following experiments* with another micro-organism.

If an adult guinea-pig be inoculated subcutaneously with 0.25 cubic centimetre of a pure culture of the bacillus pyocyaneus, an abscess slowly forms at the point of inoculation. Twenty-four hours after the injection the point of inoculation is crowded with bacilli and well-filled phagocytes; but—and this is the important point—cultures made with the various internal organs prove absolutely sterile. The bacilli, therefore, are arrested at the point of inoculation by the amœboid cells, and this can be proved by microscopic examination.

Now if at the same time that we inoculate the bacillus pyocyaneus on one side of the body, we inject on the other side a large dose of chloral hydrate, which is yet not sufficient to cause death, and repeat the dose from time to time, so as to keep the animal fully anæsthetized, it invariably dies within forty-eight hours, and all the organs contain the bacilli in incredible numbers.

It is easy to prove that in an anæsthetized animal the leucocytes are inactive. Let us take two small sponges, fill them with a pure culture of the bacillus pyocyaneus, and place each under a guinea-pig's skin. One of these animals we leave as a control, whereas we inject the usual quantity of chloral hydrate under the skin of the other. Six hours afterwards, when we take out both sponges, we find the fluid in the sponge of the chloralized animal almost as clear as when it was introduced. A few leucocytes may be seen in it, ten or twenty at most in one cover-glass preparation, whilst the control sponge is filled with a thick purulent material, which, on microscopic examination proves to consist of innumerable well-laden phagocytes. No wonder, then, that when the leucocytes refuse their work the bacilli should find their way into the tissues. We have vainly sought for any evidence to show that the fluids of chloralized guinea-pigs are better cultivating media for the bacillus pyocyaneus than those of a non-chloralized animal; in both chloralized and non-chloralized animals the bacilli seemed to thrive exceeding well in the fluids of the living body. Here, then, we have another instance of the part taken by phagocytes in the limitation of the disease.

As to the substances which attract the amœboid cells towards the virus, they have been proved to be the poisons secreted by micro-organisms, or contained in their bodies. It is probable also that in some cases these poisons have the opposite effect, namely, that of repelling amœboid cells. I have lately gained considerable evidence to show that the same substance may attract or repel leucocytes according to its state of concentration. I may mention one such experiment. If a small piece of sterilized sponge be soaked in pure turpentine and placed under a guinea-pig's skin, it will be found that, even after a lapse of twelve hours, not a single amœboid cell has penetrated into the sponge. Sections made through the sponge and surrounding parts show that the amœboid cells have emigrated in considerable numbers into the tissues around, but they are arrested at a certain distance from the sponge, and can proceed no further. A piece of normal sponge placed a little distance off is absolutely crammed with amœboid cells, though the turpentine sponge contains none at all.

Now allow a similar sponge to soak in a very dilute solution of turpentine in olive oil, and place this sponge, together with another containing fine sterilized olive oil and a third soaked in pure turpentine, under the skin of a guinea-pig. After four hours the sponge in the solution of turpentine in olive oil is crammed with amœboid cells, whilst the other sponge soaked in olive oil contains but a few, and that in turpentine none at all. Hence, then, we have the same substance exhibiting totally different effects according to the concentration with which it is applied. It is very probable that such is the case with bacterial poisons also,

*These experiments will be related in full at some future date.

and there are already some experiments which support this view. Moreover, as Dr. Woodhead has already pointed out, the same substances which in the non-resistant animal repel amœboid cells, attract these same cells in considerable numbers when the animal has been artificially protected.

When once the poisons secreted by a particular kind of micro-organism have penetrated into the system, it would appear as if in many cases the leucocytes had lost the power of leaving the blood vessels in order to attack the invading micro-organisms. This loss of power is clearly not always due to a paralysis of the cells, as these still emigrate freely in order to attack certain other bacilli, but results from some other cause still shrouded in mystery.

I must refer to Dr. Klein's theory that the cells in the lymphoid tissues attract micro-organisms, and that "the bacteria find in the cells some attractive chemical substance which suits them, and hence these cells, far from being the enemies of the bacteria, are, on the contrary, their places of refuge for a time at any rate. This view seems to me just as feasible as Dr. Ruffer's views that because these cells contain bacteria therefore they are the chief and only bacteria-destroyers. Dr. Klein supports his views by two series of facts, namely, (1) that in a great many diseases the cells are destroyed by the bacteria, an objection which I have already answered; and, (2) that in a great many bacterial diseases the bacteria are found in the lymphoid tissues of certain organs.

In my lecture, previously referred to, I alluded to the fact that when the micro-organisms are inoculated into an animal, the amœboid cells are attracted to the point of inoculation, and that by Dr. Klein's theory it was difficult to account for this phenomenon. In his reply he states that I misunderstood him, and he referred to what takes place in the internal organs. I am sorry that I made this mistake, but nevertheless my argument loses none of its force; for clearly the phenomena at the point of inoculation must be first taken into consideration, and an explanation given which will reconcile Dr. Klein's theory with the phenomena observed. With regard to what takes place in the internal organs, the only evidence in favor of this theory is that micro-organisms are often found in cells. But I contend that this is not sufficient. Should anyone meet a dead lion and find a lamb inside, he, knowing the habits of the lion, would not conclude that the lamb had taken refuge in that. True, after a surfeit of lamb, the lion might die of indigestion, but the chances of the lamb ever getting out alive would be very small. Similarly, knowing the voracious habits of the lymphoid cells of internal organs, before we can accept this theory, observations must be made showing that the bacilli of their own accord force their way into the cells; explanations must also be found for the fact that the micro-organisms perish in the cells in enormous numbers; and lastly, he must explain why, according to Bardach, Sudakewitch, and others, animals normally resistant against a given microbe succumb almost invariably when the spleen is removed.

Remember also that phagocytes exert a distinct choice between two kinds of microbes. They will leave the bacillus of tetanus for the micro-bacillus prodigiosus, and the streptococcus for the bacillus of diphtheria. This is well illustrated in the diphtheritic membrane, where at the surface one can see leucocytes taking in numbers of bacilli, but leaving streptococci almost untouched; with the immediate result that streptococci are often met in the deeper parts of the membrane, and with the remote result that secondary abscesses occurring in the course of diphtheria are never due to the bacillus of diphtheria, but to some other micro-organism.

The study of the diphtheritic membrane shows the remarkable resisting powers of leucocytes, for although the tissues underlying the membrane are necrosed and dead, the leucocytes have the power of marching in their numbers right up to the bacilli and waging war against them, though many, as I have shown, perish in the fight.

Some investigators, the chief of whom is Dr. Buchner, of Munich, have laid great stress on the bactericidal action of the serum of resistant animals. I may perhaps be permitted to express my great admiration for Dr. Buchner's work, and that of his followers, and I am ready to allow that the facts as stated by Dr. Buchner, are in the main correct; but I am far from accepting the view that the fluids of the living animal play any part in the destruction of microbes in the organism.

In the first place, let us see what happens in animals which have undergone no protective treatment. If the bactericidal action of normal serum has anything whatever to do with the resistance of animals towards a particular kind of microbe, then whenever the resistance of an animal against a given microbe is great, the bactericidal action of its serum on that microbe should also be marked; and that when an animal is not re-

sistant, the bactericidal action of its serum should be feeble, or at least slighter than that of a more resistant animal. A rabbit is not resistant, and its serum possesses a strong bactericidal action on the anthrax bacillus; a dog is more resistant, and its serum has no bactericidal action on the anthrax bacillus. We have one exception, that is the white rat, which possesses considerable resistance against anthrax, and the serum of which has a strong bactericidal action on the bacillus anthracis *in vitro*. But this exception proves the rule, for when the bacillus anthracis is inoculated into a white rat, it thrives at first remarkably well, though it is ultimately destroyed by the animal's amœboid cells. That teaches us another thing also, namely, that it is impossible to argue that those phenomena which occur *in vitro* exclusively take place in the living body.

Were other examples necessary, I would draw attention to the fact that, *in vitro*, the serum of the non-resistant rabbit is a bad cultivating medium for the bacillus pyocyaneus, whereas the serum of the resistant guinea-pig is an excellent cultivating medium for the same bacillus. And conversely, I would point out that the serum of the resistant rabbit is an excellent cultivating medium for the bacillus of Chauveau, and that of the non-resistant guinea-pig a very bad medium for the same micro-organism. Moreover, I have proved that the fluids of both kinds of animals when alive form an excellent cultivating medium for this same bacillus. And yet another example of a similar nature. The bacillus of diphtheria in most animals is only found at the seat of inoculation, and in rabbits and guinea-pigs never spreads any further; and yet the serum of such animals is an excellent cultivating medium for the bacillus of diphtheria.

With regard to Sanarelli's experiments with the cell-free lymph obtained from the frog's lymphatic sac, I must acknowledge that such experiments are extremely interesting, and throw great credit on the scientist's ingenuity; but I contend that, from the point of view which interests us, they prove absolutely nothing.

This gentlemen placed particles of organs of an animal dead of anthrax in a small closed collodion bag, from 3 to 4 centimetres in length, and capable of holding about 1 cubic centimetre, and inserted the whole in the lymph sac of a frog. Three or four days afterward he removed this bag, and placed it under the skin of another frog; and then, after a like period, under the skin of a third frog. Examining its contents on the eighth or tenth day after its introduction into the lymph sac of the first animal, he found that no leucocytes had penetrated into the bag, but that the anthrax bacilli were mostly degenerated, and no longer capable of reproducing the disease when inoculated into a non-resistant animal. Now, it is almost impossible to introduce a bag measuring more than one inch under the skin of a small animal like a frog without producing not only serious lesions, but without grave risks of contamination also. In Sanarelli's paper there is nothing to show that the fluid bathing the outside of this bag was aseptic. Moreover, when we remember how leuco-cytes will force their way in a few days into such hard resistant objects as bone and ivory, it is difficult to believe that the inside of these thin collodion bags should have been free of leucocytes. But granting the fluid outside the bag was completely aseptic, and that no leucocytes had penetrated into the bag, I do not allow for one moment that the lymph contained therein was normal, such as that found in living animals.

The lymph during the last days of the experiment, was a mixture of three different kinds of lymph, collected during eight or ten days from three different frogs. Were any evidence necessary to show that this lymph was quite abnormal, I would point to Sanarelli's own paper, in which he says that the histological elements of the tissue introduced into the bag were so altered that they were perfectly unrecognizable. Would anyone maintain that normal lymph will destroy such a hard resisting element as the nucleus of a cell?

Interesting, therefore, as are Sanarelli's experiments, they prove nothing as to the bactericidal action of the normal lymph of a frog.

It has been proved experimentally that after an animal has been artificially protected against a given infectious disease, the serum of such an animal *in vitro* is a bad cultivating medium for the micro-organism causing the malady, and by some this has been set down as a general rule. This is not so however, for the serum of animals artificially protected against the bacillus of diphtheria possesses no bactericidal action on the bacillus of that disease, and the same remark holds good for tetanus. As I was writing this paper I received a copy of a paper by Mossig, in which he states that the serum of rabbits artificially protected against the pneumococcus is a far better cultivating medium for the pneumococcus than the serum of a normal animal. This bacter-

icidal power of serum is therefore not an essential corollary of the increased resistance of artificially protected animals. Moreover, our knowledge of it is at present extremely unsatisfactory, for there is no evidence to show whether it be a specific power of the serum on the micro-organism producing the disease, and on that micro-organism only; and we have no knowledge as to how long the serum of the animal retains this bactericidal power. I have very strong reasons for thinking that it is only of a very transitory nature, passing off long before the animal has lost its increased resistance.

However that may be, see what happens when an animal is inoculated with a micro-organism on which its serum exerts its bactericidal action *in vitro*. For I repeat it, what we want to know is not what happens when a micro-organism is introduced into the test tube together with that wholly artificial substance called serum, but the point is, what happens when it is introduced into the living tissues and blood of an artificially protected animal. I may perhaps be pardoned if I again refer to a series of experiments which Dr. J. H. Walker and I made on guinea-pigs, the resistance of which had been strengthened by a previous inoculation of the bacillus pyocyaneus. We chose this bacillus because my friends MM. Charrin and Roger have shown that the blood of animals artificially protected against this micro-organism possesses strong bactericidal powers.

The guinea-pigs, which naturally possessed a high degree of resistance against this bacillus, had been further protected by an inoculation of 0.25 cubic centimetre or 0.50 cubic centimetre of a virulent culture of bacillus pyocyaneus, and at the time we used them for our experiments they were perfectly recovered and proved to be efficiently protected against this bacillus. The skin of the animals was carefully shaved and two drops of a bouillon culture were injected under the skin. This dose does not produce the slightest symptom in protected animals. The first guinea-pig was killed by chloroform *20 minutes* after the operation, and curve-glass preparations were made from the seat of the puncture and stained with Loeffler's blue. In each slide several leucocytes were found already crammed with bacilli, while a great many micro-organisms were floating in the exudation fluid, and showed not the slightest sign of degeneration. Cultures made from the point of inoculation gave an abundant crop of perfectly healthy and normal bacilli.

Another animal was killed after two hours. Here the leucocytes were already in far greater numbers and contained numerous bacilli. The micro-organisms floating free in the exudation fluid were absolutely normal, and grew abundantly on agar, gelatine and bouillon.

Another guinea-pig was examined after six hours, and the point of inoculation was full of multinucleated amœboid cells, every one of which was crammed with bacilli. A large number of organisms were still free, and consisted of short, straight, and extremely motile organisms which grew abundantly on various cultivating media.

The fourth guinea-pig was killed after ten hours, and presented much the same appearance as the last; whilst in one killed twenty-four hours after the inoculation the leucocytes had emigrated in incredible numbers and the number of bacilli floating freely in the exudation liquid had correspondingly decreased, although such of them as remained free were marvellously active. A culture was mode from the point of inoculation, and this proved to contain nothing but bacillus pyocyaneus.

Although the bacilli had remained for twenty-four hours in the living fluids of this doubly-resistant guinea-pig it was impossible to detect the slightest sign that the fluids of the living animal had exerted their vaunted bactericidal action. On the contrary, they proved excellent cultivating media for the organisms.

Further, we found that the cultures made with the bacillus pyocyaneus, which had lived for twenty-four hours under the skin of a guinea-pig proved excessively virulent; and in one case, of a rabbit artificially protected and inoculated straight into the veins, we found active and virulent bacilli eight days after the inoculation.

Some observers object to the use of filter paper for wrapping up the virus when the object in view is to study the bactericidal action of the fluids of living animals on the grounds that it may arrest some of the bactericidal constituents of the lymph. It is strange that these gentlemen should bring forward this argument, as they accept the evidence based on serum which has been filtered through a porcelain filter, and it has been the boast of some observers that the bactericidal action could not possibly be due to the cells contained in it, as the bactericidal action was not abolished by passing through porcelain. In fact, these gentlemen strain at the gnat but willingly swallow the camel. As a matter of fact, however, I showed that leucocytes in few hours had made their way through the

filter paper into the interior of the bags, and it is clearly impossible to suppose that the same paper which is unable to arrest leucocytes should prove an effectual barrier to a chemical substance.

The increase of virulence in the tissues of artificially protected animals is a result which might have been foretold; for, if any micro-organisms survive at all in such animals, they must be those which, from some cause or other, possess qualities enabling them to resist the attacks of leucocytes, and to adapt themselves to their new medium. A short time after the inoculation, all the weaker micro-organisms must have been destroyed whilst only the stronger ones survived, and by this process of elimination a more hardy race of bacilli must have been obtained. And do we not see the virulence of anthrax increased by passing through resistant animals, such as dogs and pigeons, the bacillus Chauveau rendered more virulent by living in the subcutaneous tissues of resistant animals? But I will leave this point, as most probably Dr. Cartwright Wood will shortly have more to say on this subject, though I must again insist on the fact that in a large number of bacterial diseases, if not in all, there is no evidence to show that the fluids of a living resistant animal have the slightest attenuating action on the micro-organisms causing the disease.

I think there are few pathologists who will not readily confess to the feeling of intense astonishment which seized them when they first read Ogata and Jashara's paper, or rather the account of it as it appeared in the *Centralblatt f. Backteriologie.* Everyone had been trying to find a remedy against anthrax, and everyone had failed; and now it was sufficient to inject the minutest drop of a resistant animal's blood under the skin of another animal to cure it of anthrax. True, there were a few points in the experiment which did not appear quite clear, but still the evidence seemed fairly conclusive. Unfortunately, when other experimenters tried to reproduce these results they failed without an exception. But, for the sake of argument, we will suppose that Messrs. Ogata and Jasuhara's results are correct, and that for some reason or other the other experimenters were wrong. Granting all this, even then I do not see how Dr. Klein's contention holds good that the cure of anthrax in cases may be due to the antiseptic powers of the injected blood.

In the first place the quantity injected was infinitesimally small, and it was not always injected on the side where the virus was introduced but occasionally on the opposite side; so that this drop of dog's or frog's serum, before it had the opportunity of acting, was diluted in the whole of the blood of a mouse inoculated with anthrax. Moreover, when we come to see what is the action of dog's blood on anthrax bacilli, we find that it has only a very weak, if any, bactericidal power; so that, if Dr. Klein's opinion be correct, we must suppose that dog's blood, which has normally no bactericidal power, when injected into a mouse suddenly exerts —for reasons not explained—such a strong antiseptic action that it is able to kill millions of bacilli introduced into the mouse's system, although diluted in the whole of the animal's blood.

And what I have said of these experiments applies with even greater force to experiment made with the serum of animals artificially protected against tetanus, which possesses no bactericidal action on the bacillus of tetanus.

Of Mr. Hankin's experiments with the proteid he obtained from the spleen of white rats, I cannot speak from the chemical point of view, but one thing seems to me certain, namely, that this action of this proteid cannot be due to any bactericidal powers it may possess, for it is impossible to believe that a dose of albuminoid matter which has the power of killing a limited number only of spores *in vitro*, should be able to destroy the millions of bacilli inroduced into the excellent cultivating medium formed by the mouse's tissues and fluids. May I incidentally enter a protest against the crowd of new names with which Mr. Hankin has lately attempted to saddle our bacteriological vocabulary? To speak of alexines is scarcely scientific when their very existence is a matter of considerable doubt; but to talk of mycosozin or mycophylaxin when we have not the remotest idea what sozins or phylaxins are, or whether there are any such bodies, is hardly pardonable. Surely the first thing to do is not to give a hypothetical body a high-sounding name, but to isolate and study that body.

Truly the bactericidal properties of the serum of artificially protected animals are suggestive, and deserve to be studied, but I maintain that there is no causal relation between the bactericidal properties of the serum of a given animal against a given micro-organism and the acquired resistance against the same microbe.

One of the speakers has referred to the experiments of Behring, Kitasato, and others, in which the blood of an animal artificially protected against a given microbe possesses the

property of destroying the poisons of that microbe, not only *in vitro*, but also in the tissues of the living animal; and some have gone so far as to say that it was to this poison-destroying power of the serum that the increased resistance of such animals was due. Far be it from me to depreciate in any way the important results obtained by Messrs. Behring and Kitasato, but at the same time it is evident that this poison-destroying power of the blood is not a necessary accompaniment of the increased resistance of such animals. Thus fowls possess considerable resistance, not only against the bacillus of tetanus, but even against the poisons secreted by this bacillus; and yet the blood of fowls possesses no action whatever on the tetanus poisons. Let us turn now to animals artificially protected. Undoubtedly the serum of a rabbit protected against tetanus often possesses the power of destroying the tetanus poisons, but this is by no means *always* the case; and yet the rabbits, whose serum does not destroy the toxines, possess an increased resistance against the bacillus.

We must conclude, therefore, that, although in artificially-protected animals this property of the serum may be noticed, yet it may be absent even in protected animals, and is generally wanting in animals naturally resistant against tetanus; and also that the increased resistance of such animals is not primarily dependent on the poison-destroying power of the serum and tissues.

Another point which has been mentioned is that animals artificially protected against a living microbe can also to some extent resist the poisons of that microbe. Undoubtedly this is occasionally the case, but it is by no means a general rule, nor is this property of being able to resist poisons a necessary corollary of the increased resistance of animals artificially protected. Quite the reverse, in fact; for in some cases artificially-protected animals have less resistance towards the poisons than non-protected animals of the same species. It is occasionally possible to render animals insusceptible to the poisons of the vibrio Metschnikovi, but usually those animals which are already resistant against the vibrio succumb to the action of poisons more easily than non-resistant animals.

Similarly with the bacillus pyocyaneus. Some observers have occasionally been able to protect animals against the poisons of the bacillus pyocyaneus, but in most cases they have failed, although the animals had gained an increased power of resistance. I found, for instance, that by injecting small doses of sterilized cultures at varying intervals the animals invariably died, whilst a few small doses markedly increased their resistance. The conclusion to be drawn, therefore, is that the power of resisting bacterial poisons is not a necessary accompaniment of immunity, but may be present or absent without apparently influencing in any way the resistance of animals.

There is only one class of cells which appear to possess the power of quickly becoming accustomed to bacterial poisons, namely, the cells which are designated under the term of phagocytes. No doubt means will be found to increase the resistance of other cells of the body to bacterial poisons, and far be it from me to say that such an increased resistance and the poison-destroying power of the blood and tissues of the body do not play a part in reinforcing the resistance of animals; but I maintain that at first this property is not a necessary accompaniment of the increased resistance of animals.

It has been proved that the injections of bacterial poisons so influence the cells of the body that, long after their introduction, marked changes take place in the various organs of the body—changes which often prove fatal to the animals. But no doubt the converse is true, and in other cases the changes are of such a nature that they are of assistance to the cells in resisting the action of micro-organisms and their poisons. That is a notion which is as old as the notion of micro-organisms as essential factors in the production of disease.

There are many other points which I would have liked to touch upon, more especially the evidence on the so-called immunity produced by the blood of so-called immune animals. I must leave this for a future occasion, but I may state at once that these experiments, should they prove correct, are capable of quite another explanation than that given by their authors. And may I remind the Society that, more than two years ago, Dr. Charrin and I proved the presence of the poisons of the bacillus pyocyaneus in the urine of artificially-protected animals fourteen days after these poisons had been introduced; and also that we succeeded in rendering rabbits resistant by the injection of the blood of animals suffering from the pyocyanic disease?

The explanation we gave of this phenomenon was a good deal simpler than that now offered us; but we forgot to coin half-a dozen Græco-Latin words in connection with it, which circumstance may, perhaps, account for the fact that our discovery has fallen into oblivion.

In conclusion, it is my firm conviction that the only process which has been proved to be essential to the resistance of animals—whether this resistance be natural or obtained by artificial means—is the power that amœboid cells possess of taking into their interior and destroying micro-organisms, and there is overwhelming evidence to show that this process is proportional to the resistance of the animal. Finally, let me again repeat that neither Metschnikoff nor any of his pupils have ever said that this was the only cause of natural or artificial resistance.

MR. BALLANCE.

Mr. Ballance said that the question of immunity had an especial and weighty interest for surgeons, whose daily occupation was the making of wounds, which, if they were not rendered immune against the attacks of micro-organisms, might seriously imperil life. This immunity was attained as the direct outcome of the actions of the living cells and fluids of the neighborhood of the wound, The surgeon could only aid the natural processes by employing means calculated either to prevent the entrance of, or to destroy, or to inhibit the action of, these deleterious things which could thwart the struggle of the injured tissues towards the attainment of immunity. The healing of the body against the more generalized specific diseases was comparable with the processes employed by nature in the healing of wounds. The presence of pathogenic micro-organisms or their poisons in the body constituted, in one sense, really nothing more than the presence of a foreign body, which it was the function of the natural processes to get rid of. The observation, then, of the manner in which nature could absorb and remove foreign material in wounds would to some extent aid us in the study of similar processes when engaged in warfare against disease. He had been assisted by Professor Sherrington in studying the question of repair, and they introduced small Ziegler chambers into the subcutaneous tissue and peritoneal cavity of certain animals. In the chambers, in the tissue around the chambers, as well as in the normal tissue-plasma and normal peritoneal moisture, they found two distinct kinds of cells. The one kind resembled in all respects the leucocyte; the second kind was much larger, and possessed a large oval vesicular nucleus, which stained faintly, and the protoplasm of the cell body was markedly granular. Both these kinds of cells migrated into the chambers, but there was a definite sequence of events—the leucocytes commencing to enter the chamber shortly after it was implanted into the body, whilst the larger corpuscles (which sections of the inflamed tissue around showed to be the daughter cells of the surrounding connective-tissue corpuscles) did not commence to invade the chamber until some eighteen hours had passed. Briefly, the subsequent events observed were a loss of vitality of the small kind of cell and its inclusion in the vacuole of the larger kind. The larger kind, when all available food in the shape of fibrin and blood-corpuscle has disappeared, commenced to lengthen out and spin fibrous tissue. The less nutritious the more inert the foreign body, the sooner did the amœboid tissue cells become fixed.

They were greatly assisted in the interpretation of the appearances seen in the osmic fixed preparations by the processes described by Miss Greenwood in the Phizopoda. Just as in her interesting observations little monads coexisting in the same water as amœba proteus were by it ingested, so the leucocyte became the prey of the amœboid connective-tissue cell. In the chambers we observed giant cells formed by the fusion of connective-tissue cells, or by nuclear multiplication without actual separance of the daughter cells from the parent. These giant cell forms seemed especially to be present when the substance to be absorbed was more resistant than usual. We arrived, then, in this way at the conclusion that the invading leucocyte had only a temporary purpose to fulfil in the healing of a wound. The rush of leucocytes which occurred towards a spot invaded by micro-organisms might be thought of as useful in various ways:—(1) Though of feeble vitality, they might be able to digest and destroy certain of the foreign organisms; (2) by the death of others a ferment might be set free, which might diminish the vitality of some of the bacteria, and thus cause them to be an easier prey to other cells; and (3) abundance of food (in the shape of leucocytes) for the after-coming connective-tissue corpuscles would be associated with the attainment by them of the highest degree of vigor and vitality.

All the main work, then, in wounds, not only with regard to repair, but with reference to the removal of foreign bodies, such as clot, ligatures, micro-organisms, etc., fell upon the connective-tissues cell. Their observations gave no countenance to the old Cohnheim doctrine of the development of leucocytes into connective-cells. The legitimate succession of cells was now a well-established law in pathology, as well as in embryology, and, according to this, tissue was never produced by

substitution of function. No positive proof had yet been furnished that the elements of the blood took any active part in the restoration of lost parts. It did not appear reasonable or logical that such an indifferent cell as the leucocyte should ever become transformed directly into a fixed tissue cell, and it was still more improbable that it should be possessed with such a diverse vegetative capacity as to undergo a transition in one place into a connective-tissue cell, in another into the bone, and still another into muscular fibre. And if leucocytes in the healing of wounds had a subordinate function to fulfil, it was probable that they had a subordinate place in the fight against disease and in the attainment of a state of either natural or acquired immunity. In the formation of an abscess it was not the leucocytosis to the part which arrested the disease, but the wall of connective tissue formed around the infected spot by the aftercoming connective-tissue corpuscles. The speaker then discussed the question of the action tissue cells had upon substances outside themselves, and gave his reasons for believing that these cells furnished to the body fluids their bactericidal power. The death of leucocytes, which was always occurring, might be thought of as setting free into the body-fluids fibrin ferment, and fibrin ferment (if it existed) must be closely allied to Hankin's anti-toxic substance and Wooldridge's tissue fibrinogen. Clearly, whatever was in the fluids of the body must come from the cells. The normal physiological activity of the cells of the body might thus possibly explain the defensive action of the healthy tissues and fluids against bacterial infection. This clearly existed, for to produce disease a definite dose of micro-organisms must be administered. The normal quantity of anti-toxic substance present during any given period might perhaps correspond to the anti-toxic substance present in the food vacuoles *plus* the quantity secreted from the surface of the cells into the surrounding fluid. If, on the other hand, it were proved that living serum and plasma were not bactericidal, it followed that the anti-toxic substance was a weapon only used under conditions of irritation or emergency by the cell. It might be that an increase in the normal physiological activity of the cells, acquired as a habit, might explain, to some extent at least, some of the varieties of immunity. In conclusion, he desired to express the opinion that, however beautiful the researches might be that were conducted by the aid of the microscope alone in revealing more of the activity and life of cells, yet that in this way we should not progress far on the road towards a true knowledge of the intimate pathology of immunity. The problem of immunity was essentially a chemical one, and its solution must be sought in the laboratory of the chemist.

DR. E. H. HANKIN.

Dr. E. H. Hankin said that all previous speakers had taken one or other of the two sides of the question under discussion, but he believed that it was perfectly possible to take a middle course and combine the two opposite theories. There was a good deal of evidence to support the view that if an animal was naturally susceptible, very little phagocytosis occurred, and *vice versâ;* and on the other hand there was a certain amount of evidence that, after immunity had been acquired, the fluids of the body possessed bactericidal power. It was a pity that those who belonged to the school of solidists seemed to imagine that every additional piece of evidence bearing out the truth of the theory of phagocytes was of necessity evidence against the humoral theory, and similar reasoning had been adopted by those of the opposite camp. It appeared to him that the phagocyte theory was much like that put forward to explain the power of the magnet, and like it, though it was not the ultimate explanation, and did not contain the whole truth, had yet been of service, and had led to good results. He desired to discuss in a somewhat polemical way certain criticisms which had been made against his work. It had been asked if there was any evidence that elexin was a definite chemical body, or was it only a hypothetical body supposed to exist in fluids possessing bactericidal powers? He reminded them that elexins were probably proteids, and, like most proteids, were excessively difficult to obtain in a pure state. Many observers had shown that blood-serum possessed a certain power of killing bacteria, and that this substance existed in small quantity, and was probably allied to the fibrin ferment. Some time later Halliburton isolated a body which he called cell globulin β, and which he thought was identical with fibrin ferment. By putting two and two together the speaker came to the conclusion that the proteid of Halliburton was the bacteria killer, and he did his best to obtain this body in a state of purity. Dr. Wright had suggested that these elexins were identical with the tissue-fibrinogen of Wooldridge; but there was much evidence to produce against this view. They had, for instance, exactly opposite effects as to clotting, and he was prepared to give many other reasons as to his belief in the non-

identity of these two bodies. He then dealt at length with the criticisms of his work by the French investigators; they had repeated some of his experiments and obtained different results, but they had not used cultivations of the same virulence as his own. They regarded the death of the micro-organism not as due to its being poisoned by the chemical substances contained in the fluid, but rather to a change of the media. This he considered as tantamount to saying that if a man died of poisoning by arsenic he had succumbed to a change of diet. A baby rat's blood had no power of delaying disease or of preventing it; but yet it had just as great a power of attracting leucocytes to the seat of inoculation as that of an adult rat; this was because the blood of the latter contained a fluid of bactericidal power which was lacking in the former.

DR. SIMS WOODHEAD.

Dr. Sims Woodhead, in reply, drew attention to the word "immunity," which was used in two different senses in clinical and experimental work. A patient was only exposed to the ordinary chances of infection as usually understood, whereas an animal in the hands of the experimenter was subject to very different conditions, as for instance, when injected with an organism of specially virulent character. It was well known that under suitable conditions an organism might become much more virulent than usual. In the case of the tubercle bacillus, if it were injected into the peritoneal cavity of an animal, which was ordinarily insusceptible to the bacillus, tuberculosis could be produced with great certainty. He thought that specificity was to a great extent a question of phagocytosis; that, if an animal was immune, it was due to its phagocytic power. Professor Klein's case of injecting innumerable anthrax bacilli into the lymph-sac of a frog had no analogy, and, as Metschnikoff had stated, the phagocytic power of the leucocytes might in certain individuals be imperfectly developed. With regard to the main question, all the positive evidence was in favor of phagocytosis so far as the earlier stages of infective diseases were concerned, and it was the only theory on which both the experimental and clinical evidence could be explained. There was no real evidence for the humoral theory, and such would always be difficult to get. Results obtained with serum, which was a product of dead blood, could not be assumed to hold good for living blood. He quoted some experiments of Pflüger's, in which, after injection of peroxide of hydrogen into the blood of a living rabbit, no effect was produced so long as no blood escaped; but, if a single drop exuded, an evolution of gas occurred, not only in that drop, but throughout the blood of the animal. Again, freshly drawn pus had bactericidal properties which disappeared after the pus had stood for some time. These experiments showed how delicate was the substance with which we were dealing. Klein's fluid, obtained by dialysis through collodion from the lymph-sac of a frog ought not to be considered as exactly the same as the lymph from which it was drawn; yet results obtained with this fluid were taken as holding good for the fluids of the living animal so far as its bactericidal powers were concerned. He could not agree with Klein's statement, that bacilli got into the leucocytes to avoid the bactericidal blood-plasma, for many of them were non-motile, and could not possibly push their way into the leucocytes. If a paralyzed lamb disappeared in the neighborhood of a lion, it would be only fair to accuse the latter of some active part in the transaction. He firmly believed that the discussion, if it had not brought to light much new truth, would yet open up many new paths for investigation.

SIR GEORGE HUMPHREY.

Sir George Humphrey, having thanked those who had contributed to the discussion, congratulated England on its rising school of bacteriologists, who had accomplished so much, though having great disadvantages to contend against, owing to the false sentimentalism and prejudices against the true interests of humanity which existed in that country. Though he expressed himself as unable to sum up at all adequately the points of the discussion, yet he desired to offer the impressions the remarks of the speakers had made on his own mind. Zymotic diseases were dependent upon the introduction of micro-organisms into the system, and these microbes possessed the power of rapid propagation, and exerted a pernicious effect upon the organs of the body. They produced, moreover, certain excreta or toxines, which, even more than the microbes themselves, were prejudicial. The microbes and their toxines could not be dissociated; they both came in contact with the cells of the body, and with the body fluids. These body cells were undergoing continual change—change essential to their vitality, absorbing, modifying the material absorbed, and returning what was excreted into the fluids around. All body cells were phagocytes; that was an essential feature of their existence. But they were promiscuous feed-

ers, and would take up other things besides those normally supplied from the blood—they would absorb foreign matters—they would certainly absorb bacteria. Speaking technically, they were phagocytic as regarded the bacteria with which they came in contact, and there was abundant microscopical evidence of this, that they could exercise a solvent or destructive influence upon them. By far the majority maintained that the cells were an important element in the destruction of bacteria. Professor Burdon-Sanderson has found it difficult to conceive that there could be any special function in cells by which they could exert this malignant influence upon bacteria. But it was not necessary to assume that they were specially bactericidal; they were only phagocytic to bacteria by virtue of their general phagocytic qualities; it was a part of their general natural function, and not a special endowment. There was evidence that certain poisonous elements introduced into the blood did tend to attract leucocytes into their neighborhood. In some cases, the cells, so attracted, overpowered and destroyed the bacilli; while in the other cases they failed to do so, and the microbes spread over the system. In such instances cells might be found packed with microbes, the latter afflicting the former with such an indigestion as to cause their death.

On the whole, the general result of the discussion seemed to be in favor of the phagocytic action of leucocytes and other cells upon bacteria. A much more difficult question was the effect of the body fluids upon the bacilli and their toxines. In considering that we passed out of the range of ocular inspection and almost beyond the range of chemical examination, we had to deal with fluids of very peculiar composition and very great instability. It was found that the fluid serum in the test-tube might be fatal to a microorganism, and yet inject that microbe into an animal from which the serum was obtained, and it would flourish there; this showed with what delicate materials one had to deal. In this part of the discussion it seemed to him that the probability was in favor of the humoralistic view. But the fluids and the solids of the body interacted so intimately each upon the other that there could be no such thing as solidism and humoralism separately. Anything that could affect the blood serum must also produce an effect on the cells and the bacteria in it. The toxine of the bacteria diffused throughout the blood serum must exert some pernicious effect upon that serum as well as on the cells, and the serum so altered might finally react on the bacteria, and we must not assume that there was no effect because we could not demonstrate it. All the results he had spoken of so far have been obtained by experiment upon animals, but Dr. Bristowe had thrown some practical light upon the subject. He had remarked especially upon the resistance offered to the entrance of bacteria to the body, and referred to the probability that they became altered in their passage. When we considered the utterly inappreciable evidences there were to account for the degree of immunity possessed by different persons, we should not be surprised that it was surpassingly difficult to trace out the causes of immunity in different animals. He regarded it as almost hopeless to form an idea of the essential nature of the change which produced immunity from small-pox by vaccination. He regretted that the point of exhaustion had been rather summarily excluded from the debate. The manner in which a disease attacked one part, ceased there, and passed to another was difficult to explain on any view, phagocytic or other. The migration area in the course of a common cold was an instance in point. He referred to the phenomena in scarlatina, its incubation, its sudden accession, the sequence of phenomena to quiet subsidence, and, if not fatal, the immunity of the subject for a period. How was this explained by phagocytosis or any other theory? To what influence did the microbes succumb after having obtained a maximum of power? Was it because of some poison which they themselves engendered, or because they had exhausted the pabulum upon which they existed? It was difficult to explain the course of certain diseases of the skin by any theory of phagocytosis. We might rest assured that the interest in this subject had not yet passed away, for many of these problems were still invested with uncertainty, and that uncertainty was an invitation to work yet to be done.

MORTALITY OF DIPHTHERIA.

The comparative mortality of diphtheria in the principal countries of the world is as follows: England heads the list with only 41 deaths per 100,000 inhabitants. For the same number of inhabitants Belgiun had 44, Holland 53, Switzerland 59, Italy 79, France 80, Germany 100, Scandinavia and Russia 110, Spain 112, Austria-Hungary 116, and America 140. The statistics were collected by M. Janssens, the Chief of the Bureau of Medical Statistics of Brussels.—*Revue Médico-Pharmaceutique,* October, 31, 1891.

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LEADING ARTICLE.

THE RELATION BETWEEN EPILEPSY AND CHOREA.

Scarcely any other two diseases have been so extensively written about and theorized upon, with less discovery of absolute facts regarding them, than epilepsy and chorea. When all the mass of literature concerning them is sifted down, no more can be said than that their pathology is still a matter of uncertainty. Notwithstanding, it is of interest to realize exactly how far these two disorders can be compared, and if enough can be gleaned from our knowledge to connect them with the same causative conditions, something at least will have been gained. With this in view, Dr. G. P. Trowbridge, of the Danville (Pa.) State Hospital for the Insane, has made some careful clinical studies, and has recently published in a late issue of the *Alienist and Neurologist* a very interesting paper discussing at some length the relations which may exist between these two neuroses, as well as giving the results of a collective investigation among other asylums of cases which support the view that a very close relation does exist. Although for for many years the likeness existing between chorea and epilepsy in many of their features has been noticed, yet very little has been written concerning it, and for this reason we are indebted to Dr. Trowbridge for his interesting paper.

In the purposes of his paper, in order to compare cases of these neuroses in as pure a form as possible, Dr. Trowbridge confines his remarks to idiopathic examples of the two affections, excluding all those cases in which discoverable causes existed, although we cannot fully agree with him when he relegates all such cases to a category which he broadly terms "pseudo-forms of the disorders;" for it is in entire accord with our knowledge of these affections, that their real cause may be engendered by *very various* physical causes. Although, therefore, in our opinion, there is no reason why the discussion of the points of similarity between the two neuroses should not include all cases of either disease, no matter what the nature of their

causation, still, since the cardinal features of both are perhaps most strikingly apparent in the large class of unexplainable cases we call *idiopathic* or *essential*, we will confine these remarks to that variety of the two diseases. Clinically, we find the following points of similarity between chorea and epilepsy.

I. Both are markedly hereditary, and very often it is found that they affect the same families throughout several generations, and that choreic parents will have epileptic children.

II. Both diseases are characterized by convulsive movements of the muscular system,—in epilepsy this is periodic (but it sometimes continues for hours and even days), and in chorea it is a constant symptom except during sleep. The convulsions in both are undoubtedly due to interference with the stability of action of the nerve cell, causing them to discharge nerve-force irregularly.

III. They may coexist in the same patient, or a patient may first have chorea and have it cease only to mark the beginning of epilepsy, or epilepsy may usher in chorea.

IV. Both chorea and epilepsy affect the mind to some degree, and it is said by Warrington that the mental disturbances arising from them are very similar, so that it may be said that they produce nearly the same mental affections; and it will be admitted that these forms of insanity do not conform in type to other forms of ordinary insanity.

V. Both diseases are probably due to lesions of the brain only, and both are chronic disorders, or incline to become so.

The above are some of the points of likeness which chorea and epilepsy have in common. In support of the assertion that these diseases sometimes exist simultaneously in the same case, Trowbridge has collected seven such cases from American asylums for the insane, and fifteen cases which were affected with both diseases, but not at the same time. In seven of these fifteen cases chorea appeared first and was followed by epilepsy, and in only three cases did epilepsy appear before the development of chorea. In two cases chorea merged directly into epilepsy, while in the remaining cases an interval elapsed between the cessation of the one and the onset of the other.

Having glanced at one side of the question, let us look for a moment at the reverse side. Does *chorea of childhood* have any close relationship to hereditary epilepsy? If the affections were due to different degrees of the same pathological cause, should we not expect that their percentages of cures would be more nearly the same?

To the contrary we know that chorea of childhood in the large majority of cases runs a more or less definite course and that recovery is the rule and not the exception. Certainly very few rational signs point to any very close relationship between ordinary chorea of childhood and idiopathic epilepsy.

It is different, however, with hereditary chorea and chorea of adults without hereditary predisposition. These choreic manifestations are progressive, always attended by mental disturbance of some sort, and go from bad to worse until death terminates the picture of misery they present. No treatment influences their course or even alleviates the movements. It would seem, therefore, that between those choreic states of later life and chronic epilepsy there is a marked relationship, and that further study may unearth facts which will further prove the truth of this.

Many of the families affected with hereditary chorea have epilepsy very frequently in some branches of the genealogical tree, and sometimes it seems as if it had taken the place of chorea in one generation, which again reoccurred in the next; but too much importance cannot be laid upon this point for the same can be said of phthisis, which has been found to frequently exist to a remarkable degree in families subject to hereditary chorea.

This whole subject is one of purely speculative interest at present, and the most that can be said is that *chronic* forms of chorea present phases of causation, symptomatology, duration and termination which may justly make us consider whether the relationship between them and chronic idiopathic epilepsy is not more than a mere resemblance.

BOOK REVIEWS.

THE PRINCIPLES AND PRACTICE OF MEDICINE. By William Osler, M. D, New York. D. Appleton & Co., 1891.

The accuracy, clearness, and directness, the thoughtfulness and wide knowledge which have made Dr. William Osler's name so well-known to all serious students of medicine as a science, are as agreeably conspicuous in his latest book as in his many previous publications. A wholesome disregard for the "authority" which consists in the repetition of old commonplaces, and too easily accepted theories, is another familiar characteristic to be found in the present as in its author's former work—and the book will surely secure for itself a larger and more appreciative audience than the undergraduate or young students for whose use it is chiefly meant.

The arrangement of subjects is new and practical. First, specific infectious diseases—thirty-five diseases, including some described as doubtful (Well's disease, milk diseases, Malta fever, mountain fever, and sweating sickness), are included; constitutional diseases follow, then diseases of the digestive, respiratory and circulating systems, of the blood, of the kidneys, nervous system and muscles, the intoxications (obesity is construed as one of these), and last, those due to animal parasites.

It is impossible to undertake in a review to point out all the things which interest or strike the attention in a large book, whose subject is the whole science of medicine, but some detailed examination is both a pleasure and a duty here.

In the opening article on typhoid fever an excellent historical account of the progress of the differentiation of that disease from typhus and the other continued fevers is given, a result largely due to Louis and his American pupils, the Philadelphians Gerhard & Stillè, and George C. Shattuck, of Boston. The modes of infection are not considered at very great length, but an account of the instructive epidemic at Plymouth in 1885 is included. We turn to the treatment to find what the author has to say as to the newer methods. A moderate ground is taken as to the Brand treatment, though perhaps too much stress is laid upon the sufferings of patients from the cold bath. The statistics quoted are not strikingly in its favor: "expectant plan" mortality, 14.8 per cent.; incomplete bath treatment, 12.3 per cent.; strict bath treatment, 7 per cent." We had occasion several years since to examine the mortality of typhoid during a period of ten years (before the use of Brand's treatment) in two of the chief hospitals of Philadelphia. In neither did the mortality exceed 11 per cent.

For private practice Prof. Osler recommends in preference a lukewarm bath gradually cooled, or the cold pack, or repeated sponging. He pronounces antiseptic medication of no value. The routine administration of turpentine he thinks "is a useless practice for the perpetuation of which in this generation H. C. Wood is largely responsible."

In malarial fever Dr. Osler insists properly and very strongly on the absolute value of Laverou's hæmatozoa in the case of doubt in the diagnosis. "Not a single observer who has had the necessary training, has failed to demonstrate the existence of these parasites." Another means of attaining certainty, which anyone may apply, is "that an intermittent fever which resists quinine is not malaria." An illustration of the forms of the parasite and a note of the powers required in lenses for searching them would have been useful additions to this section.

As might have been expected, the book is strongest in its description of these affections where the nice observations, trained acuteness and painstaking minuteness of the diagnostician are most required. No such clear and simple presentation of the conditions, rational and objective, and the pathological anatomy of heart diseases, is known to us as is here made. One may occasionally criticise the refinements of pathological language as excessively technical. A student would make little of a statement that "a subvalvular stenosis, the result of endo-carditis in the mitro-sigmoidean sinus, usually occurs as the result of a fœtal endocarditis."

Another especially good chapter is on anæmia. The author nails his banner to the mast and stands for heroic doses of iron, Bland's pill for choice, and for quantity, say eighteen grains a day of the sulphate of iron, "one of the most brilliant instances of the specific action of a remedy." The section devoted to nervous diseases includes the most recently described forms of which modern refinement of diagnosis has added so many, and indeed the whole book is thoroughly up to date.

Dr. Osler is something of a nihilist therapeutically, and there are places where his laudable distrust of drugs carries him too far, but as a rule the treatment, which is

rather outlined than described, is on the whole sufficient. It is far better not to inculcate the sprouting M.D. with the idea that drugs are all powerful and must prevail. Let him have a wholesome distrust of their infallibility, and let him imitate Dr. Osler too in his accuracy and simplicity of thought and word, and in his hearty devotion to the highest and best work of his profession.

LITERARY NOTES.

THE WORLD'S COLUMBIAN EXPOSITION.

Bond & Co., 576 Rookery, Chicago, publish a four hundred page advance Guide to the Exposition, with elegant Engravings of the Grounds and Buildings, Portraits of its leading spirits, and a Map of the City of Chicago; all of the Rules governing the Exposition and Exhibitors, and all information which can be given out in advance of its opening. Also, other Engravings and printed information will be sent you as published. It will be a very valuable Book, and every person should secure a copy.—Price, 50 cents, post-paid.

SOME WAYS OF SERVING SWEETBREAD.

From Harper's Bazar.

Sweetbreads are daily becoming more and more in demand, both to tempt the capricious appetite of convalescing invalids, and for dainty dishes on dinner, lunch, or tea tables.

While by no means difficult to cook, care must be taken to follow the directions for their preparation, the process being the same no matter which of the recipes is chosen.

In selecting, the larger, plumper, and more fleshy they are, the better. Put them first into tepid water, letting them remain from fifteen minutes to half an hour, then set on the fire in cold water to which a little salt has been added. As soon as the water begins to boil, pour it off, and slip them into a pan of cold water until they are perfectly cold. This parboiling and chilling, which is termed *blanching*, makes them fair and white.

Next remove the pipe and skin. For this purpose scissors are better than a knife. (It is said that woman signalized her entrance into the chemist's laboratory by substituting the pitcher and scissors for the bottle and knife always used by man.) And as the sweetbreads are in pairs cut them apart.

Served Whole with White Sauce.—The sauce requires half a cup of milk, one tablespoonful of flour, and a piece of butter the size of an English walnut (allow the flour and the butter to each sweetbread). Braid the flour and the butter together, let the milk come to a boil, stir in the flour and the butter, add a blade of mace, and let all simmer five or ten minutes. The sweetbreads are simmered in this sauce until every tinge of pink disappears. They are kept in shape with the wooden toothpicks—called toothpick skewers—used for fish and small birds.

When thoroughly done, lay them on a dish, put a border of parsley around them, and pour the white sauce over and around them. The mace is, of course, removed before serving.

Sweetbreads with Cauliflower.—Cut the cauliflower into handsome pieces, blanch and trim the sweetbreads, and lay them all in a deep saucepan. Fill two-thirds of the depth of the pan with water, season with a few blades of mace, pepper, and salt. Let the whole stew for three-quarters of an hour.

To serve, place the sweetbreads in the centre of the dish, arrange the cauliflower in a border, and pour the gravy—thickened with cream and a tablespoonful of butter and flour rubbed together—over the sweetbreads.

Sweetbreads with Tomato.—Stew a quart of tomatoes until they are quite smooth—which will require about three-quarters of an hour—then rub them through a strainer so that you will have a smooth thick sauce. Have ready four sweetbreads, blanched and trimmed. Put them into a pan with the tomato, season with salt, pepper, and mace or nutmeg. Add two or three tablespoonfuls of butter rolled in flour. Set the pan over the fire, and stew until the sweetbreads are thoroughly done, which will be in about three-quarters of an hour. Before taking off, stir in the well-beaten yolks of two eggs. Serve with small pieces of fried bread placed in the dish with the sweetbreads, and the sauce poured over.

SAUERKRAUT IN DYSPEPSIA.

Dr. Heller, of Vienna, thinks he has found a remedy for dyspepsia in that well known digestive tonic, sauerkraut. It is especially recommended to nervous invalids who suffer from eructations and flatulence after meals. Dr. Heller is not trying to be funny, but apparently means what he says. That may do for the German stomach, but, perhaps, the American dyspeptic would do as well to stick to mince-pie and hot soda biscuits, with an occasional Welsh-rarebit thrown in.—*Med. Rec.*

PERISCOPE.

THERAPEUTICS.

CORN CURES.

Professor Whelpley gives some interesting facts in *Notes on New Remedies* about corn cures. The sale of plasters and other applications for corns is a large business, and all these preparations have as their active basis salicylic acid. It is combined with collodion and 9 to 48 parts, and painted over the corn; it is combined with rosin and balsam fir, with lanolin, 10 drachms of lanolin to 6 salicylic acid; with simple cerate, one of the acid to six of the cerate, and so on.

THE BROMIDES AND INCREASED SUSCEPTIBILITY TO INFECTION.

In the *Mercredi Médicale*, October 21, 1891, Dr. Féré takes up the assertion that patients undergoing bromide treatment are more susceptible to infection than others, particularly to the influence of Koch's bacillus. Upon this latter point there are no positive clinical evidences within the author's personal observation, yet during epidemics of pneumonia at the Bicêtre those persons under the influence of bromides proved most vulnerable. Animals inoculated with tuberculine virus after large doses of bromide began to lose ground immediately, and soon died.

ELECTROLYSIS OF THE CEREBRAL CORTEX IN THE TREATMENT OF JACKSONIAN EPILEPSY.

Dr. Negro (*Giornale della R. Accademia di Medicinia dix Torino*, Luglio-Agosto, 1891, p, 484) made a communication before the Academy of Medicine of Turin on this subject,

Among the operative procedures employed in the treatment of certain forms of partial epilepsy, the excision of portions of the cerebral cortex corresponding to the motor centres has been of late successfully performed. This method of excision offers several inconveniences, the principal of which are the following:

1. Injury to the neighboring cortical or subcortical regions, thus producing paralysis or paresis of muscles not in the realm of the Jacksonian epilepsy.

2. These operations are very bloody, and sometimes give rise to serious hæmorrhages.

The author proposes to substitute for the knife, electricity, to accomplish the excision of the brain cortex. He places a large electrode, the positive pole upon the sternum of the patient, whilst with the negative pole tipped with platinum, which he inserts at various depths into the diseased brain substance, he effects electrolysis.

A current of two to three milliamperes will in a very short time destroy the diseased brain tissue.

An operation performed by Dr. Carle with this method in a case of meningo-encephalitic gummosa succeeded in suppressing the epileptic phenomena.

SODIUM HYPOSULPHITE AS AN INTESTINAL DISINFECTANT.

Goll says, in the *Pharmaceutische Centralhalle*, that the abandonment of sodium hyposulphite in treating diseases of the stomach and intestines for other and newer remedies is a great mistake. In solutions, according to Goll, it is far more efficacious than resorcin, Carlsbad water, and salts, and, in fact, any and all the newer remedies used in the treatment of gastric and intestinal catarrh. Especially does it seem indicated in chronic catarrh, and its effects in this direction are very marked.

PROPHYLACTIC TREATMENT OF POST-GONORRHŒIC AZOÖSPERMIA.

Dr. L. Seligmann (*La Sémaine Medicale*, No. 51, 1891) advises to treat every case of epididymitis as soon as the acute stage is passed by methodical massage, inunctions with ichthyol salve and permanent compression. At each séance one should massage besides the testicle, the epididymis, and finally the spermatic cord as high up as possible; then rub the parts with a salve of ichthyol (5 to 100 per cent.) and place them in a rubber suspensory. By these means the nutrition of the testicle is improved as well as that of the epididymis and spermatic cord; the bands and deposits of hyperplastic connective tissue, which cause contraction and obliteration of the tubes and seminiferous vessels and subsequent azoöspermia, are caused to soften and disappear.

HYOSCIN IN THE INSANE.

Dr. Willerup (*Hospitals-Tidende*, R. 3, Bd. 9, p. 389) has used hyoscin in the Oringe Asylum. The dose varied from one-half to three milligrammes ($\frac{1}{120}$ to $\frac{1}{60}$ of a grain) two times a day, with a maximum dose of six milligrammes ($\frac{1}{10}$ of a grain), given by the mouth. He finds it of service in the chronic insane, where there is great restlessness. It is a violent poison, and its action unfortunately inconstant.

MEDICINE.

CEREBRAL ABSCESS.

Dr. Carl Lohmeyer reports (*Ber. klin. Wochenschr.*, No. 37, 1891) a case of abscess of the brain in which cure resulted from operative treatment. Patient was a man, aged 47. Up to the age of ten he had been healthy, but then had scarlet fever. No history of discharge from either ear at any time. Early in 1862 an abscess formed behind and above the right ear; it discharged itself spontaneously, and healed. Precisely the same thing occurred a year later, and when he came under treatment (April, 1889) a scar was found at the part which had been affected. In March, 1889, he suddenly felt a boring pain on the right side of the head. This persisted up to the date at which he came under observation, becoming worse in the evening. While at work he experienced giddiness to such an extent that he had to hold on to some fixed object. He could not stoop without becoming giddy, but was never so whilst sitting or lying down. No vomiting at any time of the disorder. Patient's state, when first examined, was as follows: He looked very pale and ill, his muscles were weak, and his body was wasted. He complained that his sleep was broken by pain and dreams, the former of a dull, boring, persistent nature, and localized, the exact seat being at the upper extremity of a line, 7 centimetres in length, drawn vertically upwards from Merkel's horizontal skull line (this passes between the outer angle of the eye and the upper edge of the tragus), 1½ centimetre in front of the maxillary joint and the vertical line of Merkel running upwards from that point. Pain was also experienced over the right side of the head generally, and radiated towards the right eye and shoulder. The eye felt as if it were being forced out of its socket. At the seat of greatest pain there was much sensitiveness to pressure and percussion. Neither the skin nor the bone at this part presented any abnormality. There was bony depression about the size of a finger-tip upon the right parietal bone 3 centimetres behind and 4 centimetres above the posterior and upper margin of the pinna, and 9 centimetres from the point of greatest pain. The external table and the diploë were absent at this spot. The skin over it was covered with hair and adherent to the bone beneath. The ears were examined with negative result; power of hearing was normal on each side. Pupils, optic discs, and movements of eye muscles normal. Tongue covered with thick fur; its movements normal. Mastication occasioned pain in the head, especially at the tender spot before mentioned. Swallowing was attended by difficulty as regards solids. Speech slow but clear. Heart and lungs not apparently affected. Temperature, morning, 37.4° C.; evening, 38.4° C. Abdominal viscera normal. During the day the patient remained sitting in an apathetic state, but was still able to undress himself and get into bed unassisted.

His condition remained unaltered for about one month, at the end of which time œdematous swelling and paralysis of left leg were observed. During the next month (May) the feeling of giddiness left him, but the pains in the head increased, and the loss of sleep became more marked. He passed less urine. Pulse, 54 per minute, temperature as before. On May 10th he complained of creeping sensations and numbness of the left hand, also of a feeling of heaviness in the left arm. On the 16th paralysis of the left arm was complete; both left limbs were now paralyzed. Pulse, 40, temperature, unaltered. Three days later ptosis was observed (side not stated). Power of vision in right eye now became impaired, and an early stage of optic neuritis was discovered there; left eye normal; pupils dilated; they reacted slowly, especially the right pupil. Patient grew more apathetic, and somnolence took the place of sleeplessness. Speech became indistinct, and answers inappropriate. He could now only swallow water. Early in June he became quite comatose. Pulse 38, temperature 34.4°.

The author assigns as a cause of the abscess in the brain, which was diagnosed from the above symptoms, the caries which had affected the upper and back part of the right parietal bone in 1862, and had produced the scar and bony depression before mentioned. The abscess must have originated in the upper part of the lobus paracentralis, or anterior and posterior central gyri, and have spread downwards and forwards, having its middle point about the middle of the anterior central gyrus. On June 12th an incision 6 centimetres long was made across the point of greatest pain, in a direction from above downwards and backwards. A portion of bone rather larger than a shilling was removed, whereupon the dura mater (which was normal and did not pulsate) protruded. This was incised, and the brain substance, with convolutions flattened and œdematous, brought into view and incised in its turn, whereupon greenish-yellow pus squirted out. Between 60 and 70 g. of this was obtained. The abscess cavity was then washed out with tepid boracic solution under gentle pressure,

and subsequently filled loosely with iodoform gauze. A bandage impregnated with sublimate was next applied. On the outer wall of the abscess was found a warty growth the size of a pea, composed of detritus. This, the author says, is to be regarded as the efficient cause of the abscess. After the operation the patient slept. There was a slight increase in pulse rate, but no rise in temperature during the next two days. On the third day he began to regain consciousness. On the fifth and sixth days the optic disc became normal, and the paralysis disappeared in the reverse order to that in which it set in. The patient was discharged about five weeks after the date of admission, there being still a slight flow of pus from the wound. In six weeks and a half the abscess was completely healed and the external wound closed. The man resumed work. At the date of report —five months after operation—he was well, and had in the meantime worked daily.—*Brit. Méd. Jour.*

SURGERY.

FRACTURES OF THE LARYNX.

In an article based upon experimental researches upon fractures of the cricoid cartilage (*Gaz, Hebd.* No. 42, 1891), Dr. Zilgien, of Nancy, states that an ossified cartilage requires considerably less force to sustain a fracture, than does a cartilage which has simply undergone amiantaceous degeneration. This degeneration of hyaline cartilage precedes ossification and calcification, and is characterized by fine striations in the hyaline substance. If the hyaline structure is intact the cartilage cannot be broken. It bends, owing to its irresistible elasticity due to its perfect homogeneity and the thick layer of perichondrium in which it is enveloped.

Experiments were made upon the exposed larynges of cadavers, by exercising slow pressure with the aid of a dynamometer and gradually increasing the pressure until fracture was produced. The pressure requisite to fracture the thyroid cartilage averaged 22 to 28 kilogrammes. The line of fracture was most frequently median when the cartilages were ossified or calcified, and extra-median when they had merely undergone amiantaceous degeneration. This degeneration was less marked in the median line than laterally. The pressure necessary to break the cricoid cartilage averaged from 16 to 18 kilogrammes. It usually broke on the anterior arch in three places—one median and two lateral; sometimes there was a median fracture only, sometimes a median and one lateral; rarely two lateral without median fracture.

The cricoid broke, therefore, at the same points as in the living subject. Pressure with the thumb at the median portion of the cartilage produced first depression of the anterior arch; then, if the cartilage was affected with amiantaceous degeneration, a fracture was produced at the point of junction of the anterior arch with the chaton of the cartilage about 6 millimetres in front of the crico-thyroid articulation. It is, therefore, an indirect fracture, occurring near the extremities of the great transverse diameter formed by the flattening of the cartilage, and it takes place at its most feeble point. At the same moment that the lateral fracture takes place, the anterior arch breaks at the median line. If, however, the cartilage is ossified or calcified, the median fracture is produced first. If the pressure is made along the axis which unites the two crico-thyroid articulations, the fractures occur at the same points, but the median fracture always occurs first. The fractures follow the direction of the amiantaceous striations parallel to the line of fracture. Hence they sometimes resemble the surfaces of diarthrodial articulations, excavated on one fragment with corresponding prominence on the other.

The mucous membrane is rarely torn, usually only contused. The inter-crico-thyroid membrane usually remains intact. The perichondrium is almost always torn in front, while the posterior perichondrium remains intact in the vicinity of the lateral fractures.

TREPANATION FOR EPILEPSY

Professor Studsgaard, of Copenhagen, reports three cases of this operation. In the first case, that of a man aged 27, who, when 12 years old, had been exposed to an injury of the head, nothing abnormal was found in the dura mater or the brain; the operation only improved the condition of the patient slightly. In the other case, that of a young girl aged 17, whose injury was contracted seven years previously, a detached, flat, small bone was found lying between the dura and the bone, and was removed; recovery followed. The third case is still under treatment; the patient, a man aged 24, exhibited a depressed cicatrix over the left eye. The epileptic fits were evidently caused by bony productions (osteophytes) of a depressed part of the frontal bone.—*Nordiski medicinsk Arkiv*, vol. i, No. 18, 1891.

OBSTETRICS.

ACUTE OOPHORITIS COMPLICATING PREGNANCY.

Dr. Coe, writing on this subject in the *American Gynecological Journal*, December, 1891, gives several instances of such complication and says: "In a patient with a history of previous acute oöphoritis and peri-oöphoritis, whether occurring before or during pregnancy, apprehension must be felt as to the possibility of a recurrence of the former inflammation after delivery. Labor should be conducted with rigid aseptic precautions, and with the least possible amount of interference; rough manipulation of the fundus uteri, as in expression of the placenta, is especially to be avoided."

CRANIECTOMY.

Prengrueber (*Sém. Méd.*, January 27, 1892) has successfully operated on a boy, aged 9, suffering from simple idiocy with microcephalus. The opening, eleven cm. in length by two cm wide, was made on the left side of the skull in the neighborhood of the left fronto-parietal suture. At this situation there was an exostosis both on the inner and external wall, the portion on the inside compressing the brain. Improvement was noted immediately after recovery from the anæsthetic, as his general appearance was better, his judgment increased, and his speech was more intelligible. On the next day the dribbling of saliva had ceased, and he was able to learn to blow his nose, a feat he had not accomplished before. He was soon able to play with his toys, and was much cleaner in his personal habits. Prengrueber considers that months and years must elapse before definite statements can be made in regard to permanent improvement.—*British Medical Journal*, February 6, 1892.

THE PUERPERIUM AS A FACTOR IN THE ÆTIOLOGY OF MULTIPLE NEURITIS AND DEGENERATION OF NERVE TISSUE.

H. Handford, M.D., in the *British Medical Journal*, Nov. 28, 1891, reports two cases of multiple nephritis, both probably of alcoholic origin, where the onset seemed most clearly to be determined by childbirth. He mentions a third case where the exact diagnosis was more difficult, but its onset immediately following confinement was equally clear. After quoting Grower's suggestion in this connection that "the tissue health is lowered, and hence slighter causes excite neuritis," he says the rapid progress of tabes dorsalis, and the frequency of optic atrophy in it when sexual relations are actively maintained, has been frequently noted. The relation of child-bearing is probably of a similar nature, and it is not suggested as a sufficient cause *per se*.

On the other hand, child-bearing is a common occurrence, and the neuritis may have been a coincidence, but multiple neuritis is a comparatively rare disease, and for three out of six or seven cases, in both sexes, to commence with childbirth seems an undue proportion. The author then asks, "Is the influence of childbirth one of the factors which render alcoholic neuritis so much more common in women than in men, while drinking habits are more prevalent in the latter?"

GYNÆCOLOGY.

SEPTICÆMIA FROM PUTRID FŒTUS.

Gendron (*Arch de Tocol, et de Gynec.*, October, 1891,) read a clinical report of two cases before the Obstetrical Society of Paris on October 8th. A woman had septicæmia close upon term, with high temperature and other grave symptoms. Labor set in, and when the os was half dilated, Gendron hastened the dilating process with his hand and extracted the decomposed fœtus. After rigorous antiseptic treatment during childbed, the patient recovered. A similar case was recently under his care. The cervix was rigid and dilatation imperfect. Gendron made an incision into the os posteriorly; then dilatation was easily completed and the putrid fœtus extracted. Recovery was perfect after the same treatment as in the first case.—*Brit. Med. Jour.*

HYDATIDIFORM MOLE.

Lwow (*Centralb f. Gynak.*, No. 1, 1892) has had four molar pregnancies under his own observation. The most evident of the predisposing causes is hyperplastic endometritis. There was no evidence of syphilis in any of the cases. All four had previously been under his care for uterine disease—endometritis, retroflexion, dysmenorrhœa, etc. Three were multiparæ, the fourth was a primipara. In all, diagnosis of molar pregnancy was easy on account of the unusually rapid increase of size of the uterus, and the free flooding; whilst in two cases the grape-like masses could be felt through the os uteri. In two cases the mole was spontaneously discharged. In the others it had to be removed with the hand, as repeated hæm-

orrhages threatened the patient's life. The entire mass could not be removed in one instance, as Lwow feared the uterine walls, as thin as paper, might be perforated by the finger. After the greater part of the mole had been taken away, the uterus contracted freely, and the remainder came away during convalescence. Lwow holds that warm irrigations, thrown up into the uterus, are perfectly justifiable after molar delivery. In all four cases they were employed, and proved satisfactory.—*Brit. Med. Jour.*

PELVIC INFLAMMATION IN WOMEN.

Dr. Potter, in a pathological study of this most interesting condition, which furnishes such a large proportion of the gynecologist's work, regards McMurtry's grouping of varieties of inflammation as about the best. It is as follows: 1. Inflammation of serous and cellular intra-pelvic tissues cannot be separarated clinically nor histologically, hence they cannot be properly distinguished by the terms perimetritis and parametritis. 2. The pelvic cellulitis of Emmet, which corresponds to the peri-uterine phlegmon of Nonat, is as rare as inflammation of the cellular tissue elsewhere. 3. Pelvic inflammation is, generally speaking, peritonitis resulting from disease of the ovaries or Fallopian tubes, or both. 4. Pelvic peritonitis presents every grade of activity, and is always symptomatic, never idiopathic. These inflammations are either of puerperal, gonorrhœal, or miscellaneous origin, and under the latter are included all infections of the endometrium by instruments, medicinal agents, and traumatism.—*American Gynecological Journal*.

PÆDIATRICS.

ZONA IN CHILDREN.

According to Comby (*La Bulletin Médical*, November, 22, 1891), the pathogenesis of herpes remains to be explained. He has studied the disease during eight years, and has collected thirty-three cases, twelve of which occurred in boys, and twenty-one in girls. The predominance of the disorder in the female sex has been observed by other authors. According to the statistics of Comby, the disease occurred in four children of less than two years of age; the ages of the rest of the cases varied from two to ten years. One of the patients was only eight months old. The affection did not present a contagious character, and it was more common in the spring and summer than in the months of autumn and winter. The symptoms are purely of an objective character, and it is worthy of note that, in children, herpes assumes a benign type. There is generally a slight febrile reaction, accompanied with gastric disturbance. The neuralgic pains are much less troublesome than in the case of adults. The author believes the disease to be essentially an infectious neuritis, and that the characteristic eruption is nothing more than a trophic manifestation which is proportionate to the extent of the lesion. Herpes may have also, however, a traumatic or other origin. The treatment is quite simple, and consists in the local application over the diseased parts of antiseptic remedies.

TREATMENT OF DIPHTHERIA BY IRRIGATIONS OF SALICYLIC ACID.

Parisot highly recommends (*Bull. Gén. de Thérap.*) the employment of irrigations of salicylic acid (1 to 1000) in diphtheria, as proposed originally by Weise and others, and affirm that whereas, before resorting to this method of treatment, the mortality from that disease as occurring in his practice was large—ten cases out of every fourteen— in a recent epidemic in which he had relied on the irrigations, there were only five fatal cases out of every twenty-four. He makes the solution by dissolving 1 part of the acid in twenty parts of alcohol, and then adding 980 parts of water. The apparatus which he used for the irrigation was simply a fountain syringe, the rubber tubing ending in a small glass tube. The head of the child is held by an assistant, the tongue depressed, and the jet directed into the mouth and posterior pharynx with sufficient force to detach and remove the false membranes if they happen to be loose. The quantity used must depend on the judgment of the operator. The irrigation does not wholly replace other remedial measures, such as the frequent administration of stimulants. Parisot makes some remarks as to the action of salicylic on false membranes which, if true, are of great practical importance. He believes he ascertained by experiment that this acid is destructive to diphtheric formations; in distilled water the false membrane was simply disaggregated, and this disaggregation took place slowly, while in solutions of different strengths of salicylic acid the exudate disappeared rapidly; at the end of a few minutes nothing was found but the meshes of the network serving for support to the cells of the exudation. The stronger the solution of salicylic acid the more prompt and complete was the disappearance of the exudate.

HYGIENE.

"L'ESTOMAC ET LE CORSET."

Dr. Chapotot, in a recent essay published by Baillière under this title, gives a fair summary of the opinions of experts such as Bouvier, Dickinson, Sibson, and others, on the real and imaginary evils attributed to constriction of the waist. The question of the true position of the stomach is very important in respect to the correct interpretation of abnormal relations of the abdominal viscera detected after death. The most original portion of Dr. Chapatot's essay refers to a matter of some interest to ladies. Young women have often reason to complain of disagreeable noises caused by air moving about in the epigastric region. Our author attributes these noises, which differ from borborygmi, to a vertical bilobulation of the stomach caused by the pressure of stays. During expiration the upper lobe is relieved of pressure by the ascent of the diaphragm. The lower lobe is, on the other hand, subjected to great pressure from the abdominal muscles. Hence air and liquids are forced upwards into the upper lobe through the narrow isthmus produced by the pressure of the stays; as they pass through the isthmus and issue out of it the characteristic gurgling sound is produced. If the stays be taken off, the sounds are no longer heard, but they may be reproduced by applying any other form of constriction to the abdomen at the same level.—*Brit. Med. Jour.*

A CHEAP DISINFECTANT.

At this season of the year and during the summer and autumnal months, disinfectants should be kept ready at hand for needed use, but not in any measure to take the place of cleanliness.

The nitrate of lead is the cheapest disinfectant known that fulfils its intent. It does not, however, prevent putrefaction. The chloride of lead is much more effective in all directions. It is made by dissolving a small teaspoonful of nitrate of lead in a pint of boiling water; then dissolve two full teaspoonfuls of common salt in eight quarts of water. When both are thoroughly dissolved, pour the two mixtures together, and when the sediment has settled you have two gallons of clear fluid, which is the saturated solution of the chloride of lead. A pound of nitrate will make several barrels of the liquid. The nitrate of lead costs from eighteen to twenty-five cents a pound at retail.—*Monthly Bulletin.*

THE INFLUENCE OF INFUENZA ON THE DEATH-RATE OF 1890.

The report of the Registrar-General for 1890, relating to the births, marriages, and deaths in England and Wales during that year has just been issued. The birth-rate, which had shown a continuous decline since 1876, was the lowest recorded during any of the last fifty years, although the marriage-rate during the last four years has shown a steady increase, and was higher in 1890 than in any year since 1883. With regard to the deaths during the period under review, it appears that the standard of public health reached in recent years was not maintained during 1890. The death-rate, which had been 19.1, 18.1, and 18.2 per 1,000 persons living in the preceding three years, 1887-88-89, rose to 19.5 in 1890. It should be noted, nowever, that compared with other earlier years, this death-rate was still a low one; for in none of the ten years 1881-90 was the death-rate as high as 20.0 per 1,000, whereas in no year previous to 1881 was it ever so low. The increase in the rate of mortality in 1890 is attributable to the epidemic of influenza, to which, although it was generally prevalent only during the first quarter of the year, 4,523 deaths were directly ascribed. This, however, probably represents but a small proportion of the mortality really attributable to influenza; for the immense increase in the mortality from respiratory diseases at the same time, notwithstanding the mildness of the season, was clearly due to the same cause. The Registrar-General estimates that the number of deaths directly or indirectly due to epidemic influenza in 1890 at upwards of 27,000, which is equivalent to a death-rate of almost one per 1,000. It is satisfactory to note that the mortality from nearly all other zymotic diseases was below the average. Only 16 deaths resulted from small-pox in 1890, the smallest number in any year on record. The deaths referred to constitutional diseases, especially to phthisis, showed a marked increase, probably attributable to the fact that a number of persons of phthisical constitution were prematurely carried off by the influenza epidemic during the earlier part of the year.—*Brit. Med. Jour.*

ANOTHER REMEDY FOR WHOOPING-COUGH.

M. Chibert declares that he has rapidly stopped the kinks of whooping-cough by sprinkling finely powdered iodoform on the child's pillow—*Répertoire de Pharmacie*, No. 8, 1891.

MEDICAL CHEMISTRY.

TESTING LARD.

The following method for detecting vegetable oils in lard is suggested by Welmans:

Dissolve the lard in chloroform, and shake the liquid with a solution of sodium molybdate in nitric acid. If the lard is pure the color of the mixture remains unchanged, while if vegetable oils are present the molybdic solution is reduced and assumes a green color, which is the more intense the more of the vegetable oil is present. On supersaturating this liquid with ammonia the green color changes to blue, while with pure lard no color is developed even after the addition of the ammonia.—*Zeitsch. f. angew. Chem.*

METHYL BLUE AND METHYLENE BLUE.

Both of the substances mentioned in the title have been introduced into medicine, but we have reason to know that the two substances are not only constantly confounded by wholesale druggists and dispensing pharmacists, but that the impure commercial articles are still kept in stock by many and dispensed.

Methyl blue has been recommended as an antiseptic in diphtheria and certain other diseases. Dr. H. Beyer (of Staten Island), in a paper published in the *Medical News*, first proposed it for this purpose, and recommended to apply it in form of a mixture containing 2 parts of methyl blue and 98 parts of powdered sugar.

Methylene blue is given internally, in doses of about 3 grains (in pills or capsules), in rheumatism of the joints and muscles; also as an analgesic, administered hypodermically in doses of $\frac{1}{10}$ to 3 grains; and has recently been lauded as an antimalarial remedy in doses of $1\frac{1}{2}$ grains, the daily doses not to exceed 10 grains.

Methyl Blue is the sodium salt of triphenyl-pararosaniline-sulphonic acid. It is also known as Methylblue M B I for cotton, and in German also under other names. It constitutes a dark-blue powder, soluble in water, forming a blue solution. The latter is not altered by hydrochloric acid. Addition of soda renders the solution reddish brown. In concentrated sulphuric acid, methyl blue dissolves with a reddish-blue color, which turns to blue upon dilution with water.

Methylene Blue, also known as Æthylenblau, Methyleneblue D B B, is a salt of tetramethylthionine (a body classed with the so-called thiazines, which are sulphurated derivatives of the aniline series). The most usual salt met with in the market is the double chloride of *zinc* and tetramethylthionine. According to Schultz (*Chemie des Steinkohlentheers*, 2, 762), the simple hydrochlorate of the base is also put on the market under the name of methylene blue. But we have so far not encountred the latter, all the samples which have come under our notice being the *zinc* salt, leaving on combustion about 10 per cent. of zinc oxide. It is possible that a zinc-free methylene blue is now on the market, but, as we have not had any occasion to examine the article for some months, we cannot be sure. At all events, it behooves those who use methylene blue internally to know whether they are given a zinc salt or not. Hence every fresh supply should be examined for zinc, which is easily accomplished by igniting a small weighed quantity in a crucible (which may be much facilitated by moistening the carbonized and cooled mass occasionally with a little water and nitric acid) until all signs of carbon have been burned off. The residue, if consisting of zinc oxide, will give the appropriate reactions.

We are unable to say whether the first proposers of methylene blue as an internal remedy were aware of the presence of zinc in the commercial article, or whether they used a zinc-free product. At all events, we are aware that many physicians who used the substance in this country employed the commercial article containing zinc. The question is now, What difference in therapeutic action is there between the two products, that comtaining zinc and that free from it? And did the beneficial effects of the remedy depend on the organic coloring matter exclusively, or on its combination with zinc? This is a problem to be solved by the pharmacologists.

HŒMOL AND HŒMOGALLOL.

There are two preparations containing iron, which for assimilation far surpass any compound previously used; they were first prepared by Prof. Kobert by the action of reducing agents upon the blood-coloring matter; in the first-mentioned zinc-dust is used (a minute quantity of zinc is allowed to remain in this preparation as it exerts a favorable action in certain defects of the stomach and intestines): in the last mentioned, pyrogallol is used; the former is a dark brown, the latter a red brown powder. The dose ranges from 0.1–0.5 gm. three times a day; an agreeable form of administration was found in chocolate tablets, each representing

a little over one milligram metallic iron, one to be taken fifteen minutes before meals. Patents have been applied for, for these two preparations.—*Oesterr. Ztschr. f. Pharm.*, 1891, 724.

NEWS AND MISCELLANY.

DANGEROUS PETS.

A French scientist declares that the domestic pets of the world carry at least thirty per cent. of the common contagious diseases from house to house.

One of our trained nurses sent to a physician of her acquaintance, of this city, under whom she had served, for a motto for her calendar. He sent her the following improvisation:

Instil hope,
Don't mope,
Use Soap,
So you'll best with evil cope.

THE DEBATE ON PHAGOCYTOSIS.

The debate at the Pathological Society came to a close on Tuesday last, having thus occupied three evenings. It has certainly been of great value, and it says much for the skill with which it has been conducted that the interest in a subject which involves of necessity points and arguments that are not easily grasped by the uninitiated should have been so well maintained. The paper with which Dr. Ruffer opened lasts Tuesday's proceedings was well worthy of the subject, and of one who is entitled to be regarded as perhaps the foremost student of phagocytosis in this country. It seemed to leave no debatable point untouched, and dealt in masterly fashion with the criticisms of Dr. Klein and the alternative hypothesis of Buchner and his followers. One great merit of this paper was the care with which its author avoided using the somewhat equivocal phraseology that has sprung up around this subject. There is no such thing, he boldly said, as "immunity" in the absolute sense, and throughout he preferred to speak of animals as being "naturally resistant" or "artifically protected," instead of using the hyperbolic terms that have become current. Phagocytosis, he maintained, is the only process which has been proved to be essential in the production of this resistance or protection, although "neither Metschnikoff nor any of his pupils has ever said that this was the *only* cause of natural or artificial resistance." Mr. Ballance's lucid exposition of the active part played by the fixed tissue cells in inflammation and repair and the subordinate *rôle* of leucocytes led up to the declaration that the former are probably the chief agents in phagocytosis; although the essentially chemical nature of the processes whereby immunity is secured was also pointed out. Mr. Hankin's interesting discovery of a proteid in the spleen of the white rat having bactericidal properties—although discounted by the supporters of the exclusive phagocytosis doctrine—undoubtedly gives strong support to the chemical theory of protection, and his speech was interesting as affording a reply to some of the arguments of Dr. Ruffer. In replying on the whole case, Dr. Sims Woodhead claimed that all the evidence hitherto adduced spoke in favor of phagocytosis being the agency at work in the living body, since the evidence on behalf of the humoralistic doctrine was derived from blood-serum or its products, which probably do not exist as such in the living animal. The summoning up of Sir George Humphry was weighty and judicial, and his tribute to English bacteriologists was felt to be well deserved. The debate will, we doubt not, go far towards opening up new paths of research in this extremely interesting question.—*Lancet.*

MEDICAL PROVERBS.

(*German.*)

A physician is an angel when employed, but a devil when you must pay him.

Dear physic always does good.

A disobedient patient makes an unfeeling physician.

(*Spanish.*)

What cures Sancho makes Martha sick.

The earth hides as it takes
The physician's mistakes.

He that sits with his back to a draft, sits with his face to a coffin.

Of the malady a man fears, he dies.

He that would be healthy must wear his winter clothes in summer.

(*English.*)

Diseases are a tax upon our pleasures.

A good surgeon must have an eagle's eye, a lion's heart and a lady's hand.

Tender surgeons make foul wounds.

(*French.*)

A physician is a man who pours drugs, of which he knows little, into a body of which he knows less.

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CLINICAL LECTURE.

MATRIMONIAL STERILITY.

By DR. L. SEELIGMANN,
HAMBURG, GERMANY.

Gentlemen:—English authors including Matthew Duncan, Sir Spencer Wells, Chas. West, and Marion Sims, of America, have shown by the statistics they have gathered that in England alone one marriage out of every eight is unfruitful. I have recently gathered similar statistics regarding the birth rate in Hamburg, and have found that out of 200 marriages among all clases 23 are unfruitful, which gives about the same proportion.

According to the researches of Kehrer, Duncan, Fürbringer, Noeggerath, Sänger, Prochownick, and others, the cause of this matrimonial barrenness must be laid at the door of the man in fully fifty per cent. of the cases, the main cause being the effects of past gonorrhœas and their complications.

The subject of matrimonial sterility may be divided into two classes:

1. Matrimonial sterility caused by the wife.
2. Matrimonial sterility caused by the husband.

The unfruitfulness of the wife can (according to Kisch's division) be due to the following causes:

1. Incapability of germ formation.
2. Hinderance to the contact of the normal spermatozoa with the ovule.
3. Incapability of incubating the ovule.

Apart from deformities and tumors of the female genitals, all pathological changes of the ovaries, tubes, the uterus and its ligaments and peritoneal covering, must be taken into consideration. All diseases of these parts can either act as a direct hinderance to fecundation, or by means of their action upon the nutrition of the genital organs give rise to an incapability for conception, or, finally, check the incubation of the already fecundated ovule.

Apart from tumors, which necessitate a surgical operation, or syphilis which calls for a specific cure, the advised therapy of the diseases leading to, or causing sterility on the part of the wife, has been most varied, comprising "cures" and "treatment" at various health or bathing resorts, mineral baths, especially hip-baths, cauterization of the cervical and uterine canal, and the use of the curette, etc. Recent researches have disclosed the fact that cauterizations, especially when undertaken with concentrated chemicals, accomplish an end precisely opposite to that which we desire to obtain—viz., a contraction and atrophy of the endometrium. Even the oft undertaken and apparently simple operations of division of a narrow os, and curretting, have been proved by their results, not to be the harmless operations as they have heretofore been regarded.

Recently two curative methods have been adopted by gynæcological therapeutics, which from their results may be regarded as the principal curative agents in female sterility. These are gynæcological massage in connection with gynæcological gymnastics as taught by Thure and Brandt, and gynæcological electrotherapy as taught by Apostoli.

It is highly possibly that we can by means of massage reduce the swelling and decrease the painfulness of ovaries which have been rendered thickened and painful by oöphoritis and perioöphoritis, and gradually render the organs capable of fulfilling their normal functions. It is unquestionable that we are able by means of massage to restore to its normal condition a tube which has been rendered incapable of performing its normal functions, viz., the free passage of the spermatozoa to the ovule by perimetric on salpingitic processes. Again, it has been abundantly proven that very frequently we can replace a uterus in its normal position after it has been retroflexed, bound down and apparently fixed by old parametric or perimetric adhesions, thus rendering the possibility of conception far more probable. At all events, we can at least by means of massage bring about a healthier and more

normal condition of the uterus and adnexa. By means of a methodically applied massage therapy we also find that old chronic catarrhs of the uterus are curable, as well as erosions of the os. Surely for the cure of endometritis such a mild and inoffensive treatment is preferable to the use of strong chemical reagents and the curette, especially when the cure of sterility is the desired result for which we are striving. This is especially evident when we take into consideration that the latter methods of treatment frequently give rise to an eventual stenosis of the uterine canal or atrophy of the mucous membranes.

In all cases of faulty or incomplete development of the female genitalia, in cases of uterus infantilis and small ovaries, massage in connection with electricity promises the best results, and will in all probability render conception possible.

It will be seen, therefore, that massage is not only valuable in primary sterility of the female, but also in acquired sterility induced by disease, and especially in that form spoken of by English authors as "one child sterility" in which the severity of a primary childbirth or abortion has left a diseased or abnormal condition of the ovaries, tubes and uterus.

Another important point is that massage, in connection with the ichthyol treatment so highly spoken of by Freund, will cause a disappearance of the pain experienced during coitus, so frequently observed in these cases. Therefore, apart from the general benefit obtained, massage, in rendering sexual intercourse painless and therefore desirable, will, according to Duncan, Sims and Kirch, prove a most important factor in the complicated chain of requirements leading to conception.

Gynæcological gymnastics, as taught by Thure Brandt, will prove a valuable auxiliary to massage in bringing about a normal condition of the generative organs.

As a proof of the value of massage in the treatment of acquired sterility, let me quote you the history of a case that came under my observation, and which I treated successfully with the assistance of Drs. von Englehardt and Lomer at this Polyclinic.

The woman in question was 39 years of age, and married. She had borne two children; the last having been born fifteen years previously, at which time her lying-in period had been very tedious and accompanied by a great deal of fever. She applied on the fourth of September, 1889, for treatment, and upon examination it was found that she was suffering from a fixed retroflexion of the uterus and endometritis. She was treated with massage only, and her condition became so improved that she soon ceased to visit the Polyclinic. Later she returned and the treatment was continued. In April, of 1891, she became pregnant, after a sterility of nearly eighteen years.

Gynæcological electrotherapy, as taught by Apostoli, will often complete the beneficial effects produced by massage. Both the faradic as well as the constant current find their application. For instance, when parametritis or perimetritis is a prominent symptom the faradic current should be used, but when we have hæmorrhage with profuse catarrh of the endometrium, the constant current should be used intra-uterine. I would strongly suggest that unless there is a strong indication to the contrary, the negative electrode only should be used intra-uterine in the treatment of sterility.

This for the following reasons: First, the negative electrode exerts a mildly cauterizing action; second, it exerts a basic reaction in the uterine cavity, in opposition to the acid reaction of the positive pole. Since it has been proven that a basic or a weakly alkaline reaction forms a good ground or soil for the movements of the spermatozoa, the use of the negative pole would seem eminently applicable in such cases, to which Chariere has called attention, in which the utero-vaginal secretion is acid in its reaction. The beneficial action of vaginal irrigations with a 5 per cent. solution of phosphate of soda, so highly recommended by Charriere, can be considerably augmented by an electric treatment with the negative electrode.

Matrimonial sterility caused by the husband may be due to the following causes:

1. Impotentia coëundi.
2. Aspermatism.
3. Azoospermia.

Of these three causes of male impotency, the comparatively rare condition of impotentia coëundi, and the almost equally rare condition of aspermatism, we may pass these by and proceed to a consideration of azoospermia as the most frequent cause for sterility, or rather impotency, in the male.

Azoospermia, or a change in the ejaculatory fluid in which both quantitatively and qualitatively the semen is apparently normal, but in which the most important element, the spermatozoa are absent, can be caused by the following:

1. Stoppage of the vasa deferentia in consequence of inflammation or traumatism.

2. Nutritive disturbances of both testicles:
(*a*) occurring after funiculitis, epididymitis, and duplex orchitis;
(*b*) from constitutional diseases, such as syphilis, tuberculosis, chronic alcoholism, diabetes mellitus, etc.;
(*c*) from varicocele, hydrocele, kryptorchismus.
3. Atrophy of the testicles:
(*a*) after sexual excesses;
(*b*) after long indulgence in onanism;
(*c*) after injury to certain parts of the brain, especially of the cerebellum.

The therapy of the azoospermia resulting from the majority of these diseases, namely those of a constitutional character, consists, naturally of a treatment of the general symptoms by well-known methods.

I will, therefore, restrict myself to a consideration of azoospermia as a result of duplex gonorrhœal epididymitis. Gosselin, in an article published in 1853, was the first to call attention to the influence of gonorrhœal epididymitis upon the generative potency of the male. The article then published was a most complete and exhaustive one. Gosselin's researches showed that an obliteration of the vasa deferentia at any part could result from inflammation whereby the product of the testicles would be retained from the seminal ejaculation; the latter, however, being largely composed of the secretion from the prostate and Cowper's glands. One will also usually find at the side of the testicles, and frequently enclosing the vasa deferentia, a swelling or hardening, called globus gonorrhoicus by Gosselin, which usually is at the point of constriction of the vasa deferentia.

There exists but very little literature other than this concerning the pathological anatomy of gonorrhœal epididymitis. The chapter devoted to this subject in the majority of text-books usually treats of the pathological condition found on the autopsy table, and years after the cessation of causative inflammation. So, whether these conditions as found are the results of the original inflammation, or occur eventually as a result of the long continued functional disturbance, is difficult to say.

The action of gonorrhœal inflammations upon the testicles, epididymis, and vas is differently accepted by various authors. Whereas, for example, Zeisse considers that the inflammation of either the testicles or epididymis is an entirely harmless complication of gonorrhœa, Noeggerath, on the contrary, views with the utmost pessimism the future prospects of potency after an attack of double gonorrhœal epididymitis, and Fürbringer has only lately said that it was his belief that a post-gonorrhœal inflammation of the testicles would eventually rob these organs of their function of producing spermatozoa.

Gosselin's opinion regarding the possibility of the constriction of the vas deferens becoming widened in the course of time, is in direct opposition to Fürbringer's views. For my part, I am of the belief that the pessimism of Fürbringer and Noeggerath in this direction goes somewhat too far, since a number of cases are known to almost every practitioner, in which after the patient has suffered from double epididymitis consecutive to gonorrhœa he has, nevertheless, been able to become subsequently the father of healthy children. Perchance the pessimism of the authors is due to the class of cases that have come under their experience, it being a curious fact that usually the most puzzling cases come to the notice of investigators.

As a result of extended clinical experiences, and pathological anatomical studies conducted at the old general hospital of this city, with the very kind assistance of Drs. Rast and Simmonds, I have been able to reach the following conclusions:

In gonorrhœal epididymitis with inflammation of the vas deferens and the epididymis we are also apparently dealing with a phlebitis and periphlebitis of the plexus pampiniformis, and also a lymphangitis of the lymphatics which are so extensive in these organs. The frequently observed occurrence of a continuation of the gonorrhœal process by an inflammation of the testicles, epididymis and vas deferens surely points to the probability that infection is carried to these parts by means of lymphatics, and the peri-vascular lymphatic spaces. Apart from this the hydrocele that nearly always exists in these cases, and the frequently stubborn varicocele of the plexus pampiniformis show that the vascular system is also greatly affected by the disease. In consequence of the inflammation of the vessels and inflammatory change that continues to exist, it is positive that the testicles cannot any longer receive the proper or requisite nutrition, and therefore are frequently not able to perform their normal functions. This becomes all the more positive when we remember how such a highly organized secretion as the human semen must be influenced by the nutritive condition of the organ which generates it. We see this frequently in syphilis, during the existence of which, as in cases of varicocele there exists an oligozoospermia, the seminal ejaculation containing but few

spermatozoa or if any these are perhaps with little or no vitality. While this does not point to an obliteration of the vasa deferentia it nevertheless confirms the theory of lack of nutrition of the testicles.

I would suggest that every case of gonorrhœal epididymitis, with a view to the possible development of azoospermia, should be treated as early as possible to a systematic local treatment with massage in connection with ichthyol and permanent compression. I believe that by such a course of treatment we are able to retain or restore the nutrition to these parts, and cause an absorption of the inflammatory products.

For internal medication ichthyol is perhaps preferable to the much lauded iodide of potash, since preparations of iodine exert a deleterious action upon the production of semen. The technique of the massage is most simple, and consists in kneading and rubbing movements with the finger tips of one hand. Naturally, the sensitiveness of the organ must be taken into consideration, and the masseur should at first be very gentle, beginning with the massage of the testicles, then the epididymis, and finally the vas deferens. The cauda of the epididymis should receive especial attention, since at this there is a sharp bend in the vas deferens, and it is here also that after inflammatory processes, large quantities of lymphatic connective tissues may be found.

Ichthyol in the form of a five to ten per cent. ointment, made up with lanolin as a base, should be liberally applied to the scrotum every other day. In order to obtain permanent compression I have designed a suspensory bandage the bag of which is made of some impermeable material, elastic at the sides. By padding this bag with a thin layer of cotton, a very firm and comfortable bandage is obtained.

By these means we are enabled not only to successfully treat recent, but frequently also old cases of gonorrhœal epididymitis.

HYPOSULPHITE OF SODA IN THE GRIPPE.

Dr. Ringk (*La Semaine médicale*, No. 59, 1891) asserts that the best remedy in the the treatment of the grippe is the hyposulphite of soda, which, at the end of twenty-four hours, will produce a rapid retrogression of the symptoms. He employs it as a potion in the following formula:

℞ Hyposulphite of soda.....grammes 4.
Distilled water..... " 100.
Raspberry syrup..... " 20.
A teaspoonful every one to three hours, according to the gravity of the case.

RELAPSED HIP-JOINT DISEASE—DIAGNOSIS OF SPONDYLITIS.

By H. AUGUSTUS WILSON, M.D.,

Professor of General and Orthopedic Surgery in the Philadelphia Polyclinic, Clinical Professor of Orthopedic Surgery in the Jefferson Medical College, Clinical Professor of Orthopedic Surgery in the Woman's Medical College.

Delivered in the Jefferson Medical College Hospital.

RELAPSED HIP-JOINT DISEASE.

Gentlemen:—I shall bring before you this morning a case that should impart to you some important lessons if you will observe the principle points in reference to it. His family history is tuberculous. His brother had a double hip-joint disease, and upon him an excision was performed at this hospital, and another somewhere else. This patient four years ago had on the left side a tubercular ostitis which was treated on the conservative principle of immobilization, and a year ago the inflammatory symptoms of the hip had entirely subsided with no symptom of abscess. The case was in a most happy condition and had every prospect of having a useful leg, although there existed some fibrous restrictions to free motion. While playing with some boys, he says, his left leg became twisted, the partial anchylosis was probably broken at that time, and serious inflammation immediately followed. The patient comes here this morning with an abscess of the hip-joint as a direct result of the recent traumatism, and in a condition of relapse. The question as to the method of procedure is important. If dead bone exists, it must be removed either by operation or by absorption of the inflammatory process. There can be no doubt that there is dead bone here; shall we then proceed to excise the dead bone at the same time that we evacuate the abscess? If we do so we shall expose the freshly incised surfaces which are now healthy to the action of the tubercle bacilli, and thereby tend to a still further dissemination. Hence it would be best to wash out the cavity and get it into a good condition first; subsequently we may excise the dead bone with a greater assurance of success. The operation to-day will be simply that of incision of the skin to evacuate the abscess, and subsequently we shall treat the cavity. Extending over the trochanter on the left side, as you may see, is a large swelling, a fluctuating mass, attended with a dusky redness of the surface. It is

undoubtedly an abscess having its origin in the hip-joint. For the purpose of drainage I shall make two incisions, one where the fluctuation is most pronounced, and the other at the lowermost point of the abscess. I find that over the great trochanter is the seat of the most fluctuation, and here I make my first incision. You can see the fountain of purulent material which is escaping. Now by means of a long probe I shall examine the condition of the abscess cavity. About midway down the thigh I can feel the end of the probe, showing that the pocket has extended beneath the fascia and reached this point, at which I shall make a counter-opening in order that I may institute satisfactory drainage. Now I must ascertain the extent of dead bone involvement by means of a small probe. I find at once a carious condition of the head of the femur and acetabulum, which is softened so that I can almost push the probe through the neck. Having now thoroughly washed out the entire cavity with peroxide of hydrogen, I inject ten per cent. emulsion of iodoform in olive oil, insert drainage tube, and apply aseptic dressing. The patient will be put to bed and maintained in the correct position to avoid motion, the abscess cavity again thoroughly cleansed to-morrow, and when the flow of pus has subsided, further exploration will be resorted to. In the mean time the affected hip will be kept at rest to avoid the breaking down of the already softened bone.

DIAGNOSIS OF SPONDYLITIS —ILLUSTRATIVE CASES.

This morning I want to present to you some illustrative cases which will show you how to make a diagnosis in Potts' disease or spondylitis. The cases I shall bring before you this morning will illustrate the case as well as the difficulty in diagnosing spondylitis, depending upon the age of the case and stage of the disease. Some of the cases carry their diagnosis in such a plain manner that you cannot fail to tell what they are. There is no credit to anyone in making such a diagnosis after the hump is developed, for it is impossible then to fail; the difficulty lies in recognizing the disease in its incipient stage. A curious feature of spondylitis is that all of the pain and all of the nervous symptoms are such as to draw the attention to some other part of the body rather than to the real site of the disease. This same curious feature is noticed occasionally in hip-joint disease, where the trouble is frequently referred to the knee-joint. When there is pain in spondylitis, it is apt to be referred to different portions of the body, as are also the nervous symptoms which are dependent upon the accompanying nervous disturbances. Then there is a dyspnœa associated with caries of the dorsal region. Also there may be an irritable condition of the bronchi or of the bladder, so that the disease will simulate a pneumonia, a bronchitis, or a cystitis, and, in fact, cases have come to my notice that have been treated for these conditions.

This little fellow carries his diagnosis with him in such a manner that it is unmistakable. The manner in which we left this child illustrates the care to be observed in lifting such cases. If we should lift him by the shoulders, we would allow the weight to hang upon the diseased portion of the vertebral column. As we lift the upper portion of the body, at the same time we raise the lower portion so as to disturb the existing relations about the focus of inflammation as little as possible.

The boy has a kyphosis involving the upper dorsal vertebræ due to tubercular caries. Just above the kyphosis is a bending in, which is a compensation to allow the weight of the child's head to be projected in as near as possible a straight line. The breast here is what is called "pigeon-breast," because it resembles the pointed angular condition found in pigeons and is due to the distortion of the ribs. As we examine the scapulæ, in addition we find they are both very prominent, the angles standing out in an unnatural position. The ribs have changed position, and hence the scapulæ are in this abnormal position. There is also a decided shortening of the trunk. If we were to take a curve of any kind, say one of whalebone, and straighten it out, the length of the curve would not be increased, but the distance between the ends of the curve would be greater when it was in a straight line. So here as the column curves the trunk becomes shortened. Below the diseased vertebræ the spine is straighter than the normal vertebral column. There is no trouble in this case in making our diagnosis, but the important thought is, was it possible to make the diagnosis in its incipiency. This is the question I want you to solve for me this morning. As to the diagnosis with reference to the situation, or what is called the localization of the spinal lesions, that is a subject which will require careful consideration with suitable cases after you have become more familiar with the gross manifestations of the disease.

This next little fellow presents the following symptoms: There is a disinclination to lift the head, which constantly rests against

the mother's shoulder, as you may see. As I put my hands upon my hips in the position called "the arms akimbo," I can lift the weight of my head from the spine by muscular effort in a mechanical way. This is a position assumed by children often in their instinctive efforts to lift or relieve the weight from the carious spine. In addition this child has the characteristic rasping, grunting respiration which makes it possible to diagnose caries of the spine before the kyphosis presents itself. If you will fix your ribs and diaphragm firmly by muscular action with the desire not to move them, and then try to breathe, you will have the sound produced which is almost pathognomonic of caries of the vertebræ. Another point that shows the same thing is the rigidity of the muscles, and this is an early symptom dependent upon the child's efforts to avoid motion. As I hold the child in a prone condition on my lap I do so to overcome any muscular rigidity. If I hold him up in the sitting posture I feel his desire to have me hold his head, and I feel also the rigidity of the muscles of the chest. If I ask a child with a supposed caries of the spine to stoop and pick up an object from the floor, he will not stood as a natural person will, curving his spine in the act, but will go through a manœuvre, that will keep the spine rigid, and go down sidewise by bending his knees and hips while feeling for the body with his hands. Another method, and one which is frequently preferred, is, the patient lying prone on a bed to take a child by the knees and raise the body gently sufficiently far to have the hips free from the table or bed. The spinal column instead of bending is held in a position of fixation and the curvature still shows itself in a slight degree. If I were to do this to the natural spine, the hips would arch up, and the arch would extend through the entire spinal column. The pain, when present, is generally present in the early hours of sleep, during the first two hours most markedly. This is due generally to the inflammatory exudate, and not to the pressure of bone upon nerve trunks or filaments, or it may be produced mechanically by muscular rigidity. The pain is seldom felt at the seat of the disease, but at some distance from the site of the caries. In this child it is possible by means of the fingers to follow up every spinal process above the seat of the disease; but at the site of the disease, the processes are all locked and massed together, while below they are distinct. Observe the rigidity and forced respiration in this girl which can be plainly seen by all of you in the motion of the ribs, even if you cannot hear the respiration. The mechanical explanation of this I have given by explaining the effect of rigid muscular contraction, but it is not the only explanation given. Another explanation is that it is due to compression of nerves supplying the respiratory muscles at some point in their course.

One of the best methods of making a diagnosis is by carefully noting the patient's own movements. If we ask him to turn over while lying down, he does so carefully to prevent jarring his back. The child invariably assumes a position which will relieve the body of the weight of the head. The bodies of the vertebræ are in a spongy condition and every movement produces a mechanical disturbance. As the child walks off you can see the rigidity which is characteristic of these cases. Later, when ossification has taken place, either in a deformed or straight position, this spinal rigidity remains but it is unassociated with muscular rigidity.

This man is a case which has gone through the regular routine of just such a caries of the spine. He will be of interest to us in the differential diagnoses of Potts' disease. As he stoops to one side there is a straight line up to the site of the disease without any natural curvature. On account of the position and extent of the deformity, it is impossible for the man to lie flat on his back. I want to show you what is to be guarded against in case of caries of the dorsal vertebræ. Psoas abscess is so called because it is an abscess formed in the sheath of the psoas muscle from the pus from a vertebral caries. If the disease is high up in the cervical region, it shows itself as a post-pharyngeal abscess. Lower down the pus follows the course of the psoas muscle, and may appear at various places, the most common being in the groin. By putting the legs in a flexed position on the body so as to relax the psoas muscle, you can push your fingers back so as to feel the pulsation of the abdominal aorta. If there was a swelling here or a mass which felt like a gelatinous tumor you would have evidence that there was a psoas abscess. I can pass my fingers back very far here, and I could not do that if an abscess were present. This man a few months ago had a very large abscess showing itself above the hip joint. Fluctuation was distinct on one side, and was communicated to a mass on the other side, proving the presence of a double psoas abscess. This abscess showed itself at the hip, and the patient was operated upon. You can see this long cicatrix over the hip. It

was a case for differential diagnosis at the time referred to, as to whether it was an abscess due to hip-joint disease, or was it a psoas abscess pointing in an unusual position. You will remember the boy that Professor Forbes operated upon had caries of the vertebræ, and also a hip-joint disease; so it is possible to have both conditions present co-existing in the same patient. The diagnosis was made in this case by examining the hip-joint in the manner familiar to you. There was no rigidity of the hip-joint; we could move it freely; there was no pain. Still further evidence of the correctness of our diagnosis was had at the time of the operation, which would have to be done in either case. A probe was passed up under the gluteal muscles to the lumbar region, and from there its course could not be definitely traced, although it appeared to go in the direction of the psoas muscle, showing it was not an abscess connected with a hip-joint disease. The case was drained, and gradually the sinus healed. Whether at the present time an abscess exists, I cannot say. There is no evidence of it, and I believe it has been entirely cured. It not infrequently occurs that, following an evacuation of such an abscess, resolution takes place by the absorption of any remaining cazeation, made possible by the relief of tension.

Other joints in the differential diagnosis of caries of the spine are these:—

First, in a child there are occasionally seen sprains of the spine due to falls. These sometimes also present history of pain in the stomach and legs, irritable bladder, dyspnœa, and rigidity. In these cases it is often impossible to make an accurate diagnosis at the first visit, but by careful watching you can arrive at a conclusion.

Treat such a case as possibly caries of the spine, and allow it to go on to recovery, which it will speedily do if only a sprain. Often there are cases of rachitic spines, but here we have the other evidences of rachitis; the enlarged distal extremities of the radius and ulna, and nodes elsewhere.

But most of all in these cases there is increased mobility of the spine, instead of the rigidity of caries of the spine. In rotary lateral curvature, I could hardly conceive how there could be any difficulty in diagnosing the disease from this condition. At times in Potts' disease there is at the upper portion of the body a lateral deviation, the so-called lateral deviation of Potts' disease. This, however, is entirely different from the deviation in rotary lateral curvature. There is in Potts' disease a distinct knuckle or angular curve, while in rotary lateral curvature there is a gradual bending.

In cases of hyperæsthetic, railway, or hysterical spine the spine is exquisitely sensitive. The slightest pressure causes intense pain. The method of making the diagnosis is by a study of the general condition. If there is a neurotic condition of the whole body, and the patient is a young girl at the age of puberty, you will be inclined to consider it is an hysterical spine and not caries. It is hardly worth while to enter into a study of the differential diagnosis between caries or abscess due to it, and typhlitis between hernia and psoas abscess showing itself at Poupart's ligament, or any of the other rare possibilities, because the occasions will seldom occur that will render such a diagnostic skill necessary.

At our next clinic I shall bring before you the various methods of applying mechanical restraint in the treatment of caries of the spine, and in the mean time will ask you to study the subject of the mechanical requirements as indicated to day.

SUPPURATIVE OTITIS AND CEREBRAL SYMPTOMS AFTER POSTERIOR TAMPONING FOR SEVERE EPISTAXIS.

Dr. Gellé, in speaking of the post-nasal tampon, says: The tampon both opposes the exit of blood which has already penetrated the tympanum, and facilitates the penetration of purulent secretions into an ear previously unaffected. In both cases tamponing is bad. The blood in the nostrils, pent-up, putrefies, being mixed with the microörganisms contained in the nares, and the inflammation is septic. Infectious otitis, or bilateral suppurative otitis, appears simultaneously and with the characters of gravity and rapidity of invasion common to the evolution of septic affections. If the obstacle be not removed in time, it is not the patient who will demand help—he may be in coma or delirium—and the diagnosis is made by the exit of infectious pus from one or both ears; or the patient may succumb to the propagation of the infection to the cranial cavity. [This terrible result is not rare; the author recorded a case in 1882, and has lately reported fresh instances.] Posterior tamponing is therefore, dangerous, not only to the ears, but to life itself. It is not a more or less badly made tampon, but the tamponing itself which is a bad proceeding, and the longer the tampon remains *in situ* the greater the danger.—*Journal of Laryngology, Rhinology and Etiology*, January, 1892.

COMMUNICATIONS.

LEPROSY.*

By W. H. DALY, M. D.,
PITTSBURGH.

Last March, through the courtesy of the experienced and efficient Harbor Physician, employed by the Marine Hospital Service of the United States, at Havana, Cuba, Dr. Burgess, I was enabled to examine nearly one hundred cases in the hospital for lepers, in Havana, and while I was more particularly interested in the phases and effects of the disease upon the structures, and functions, of the naso-pharynx and larynx, and other air passages, and also in the study of the fresh and recent cases, yet a general study of the disease made itself felt as one of unusual interest, since, with the great mass of busy practitioners of medicine, I had before that time only a vague idea of the clinical features of the disease, and had never in the whole course of my professional life examined carefully a case of leprosy. I would venture to say that probably 90 per cent. of the medical practitioners of the United States could neither describe the disease in many of its protean forms, or diagnosticate a recent case if they saw it for the first time.

The time has come when the National or State Legislators ought to take some adequate action to prevent the ingress of lepers to the United States, and also to forcibly isolate those already within our borders. It it therefore the duty of the profession to instruct the Legislators, and the public, upon this question. And it it a matter of congratulation to Pennsylvanians, that their State Board of Health had recently sent to the profession circulars making inquiries for the purpose of legislation, and it is to this end that I would give some views and observations briefly. But the profession could do little or nothing without the public, who are indebted to the unselfish recommendations of the medical profession for their light and life in matters of public health, by the recommendations of the latter for the stamping out of preventable diseases; hence the public ought to be informed as to the needs of the hour, and urged to act through their representatives.

An eminent dermatologist, and valued friend, Dr. L. Duncan Bulkley, of New York, had recently expressed doubts, before the New York Academy of Medicine, as to the contagiousness of leprosy, and Dr. Daly read the published paper with some apprehensions as to the effect of the expressions of so distinguished an authority upon the profession, and there were some statements made by the doctor that ought to receive further discussion.

Dr. Bulkley stated that English observers were positive that not a case of communication of the disease had ever taken place there (in England.) This upon reflection can scarcely be taken as an argument of any weight against the contagion, as great care has always been taken to isolate leprosy in the countries comprising Great Britain, and to that persistent isolation must in a great measure be attributed, not only the stamping out of the disease, but the prevention of contagion. Some light may be thrown upon the ancient habit of isolation, by quoting an historical authority, which says:—

*"The 'Mickle all,' or great disease, the leprosy, which the learned call tubercular elephantiasis, prevailed in nearly every district of Europe from the tenth to the sixteenth century.

"Scotland suffered from this hideous scourge as well as other countries. It was brought as some historians write from the East by those who returned from the crusades. But this cannot be, for there were leper hospitals in England before the crusades began. The disease lingered in the northern islands of Scotland long after it had disappeared from all other parts of Britain.

"The lepers appear to have been sent to the island of Papa."

The parish of Walls had lepers to support in Papa as late as the year 1740, as the books of the kirk-session show. In 1742 Walls held a day of public thanksgiving for the supposed final deliverance of the country from the leprosy. But there is little doubt that cases of true leprosy were to be found in Shetland up to the close of the last century.

When the leprosy seized its victim, the eye-brows and nostrils became swollen, and the countenance dusky and glossy, with a fixed look and an expression of terror. Livid pustules broke out on the face and body; the hair fell off; the voice grew hoarse and hollow. As the hideous disease advanced, ulcerating tubercles discharged a foul mat-

*Read before the Allegheny County Medical Society

*Rev. Jas. Mackensie's History of Scotland. Published by Nelson & Sons, 1890.

ter, dark scabs formed, and face looked the like a piece of rotten cork. A sense of weight and weakness oppressed the limbs. The fingers and toes mortified and fell off joint by joint. Corruption, by a frightful anticipation, began its work without waiting for the grave.

The large number of victims were no doubt found among the lower classes of society, the bondmen, the poorer tenantry, and the humble dwellers in the towns. But neither age, nor rank, nor sex was spared. The disease must have been very common in old Scotland, for every town was obliged by law to possess a leper hospital. Every hospital was bound by Papal "bull" to be provided with its own churchyard, chapel, and ecclesiastics. Saint Anne was the patron saint of the lepers, and a chapel dedicated to her was frequently connected with the hospital. The leper hotels were not intended as places for medical treatment of the disease, but merely for the separation of the diseased from the sound, lazarettos where the infected performed a life-long quarantine. They were for the most part founded and endowed as religious establishments, and were generally under the rule of some neighboring abbey or monastery. The inmates, doleful creatures, were expected to offer up daily prayers for the souls of the founder and his family. An order of Knighthood—the Knights of Saint Lazarus—was instituted about the time of David I. for the care of lepers. Knights of this order are said to have been common in Scotland and France. What kind or extent of power these knights were allowed to exercise over the lepers and leper houses is not known. Every person seized with leprosy within the walls of a town was removed at once to the hospital. If he had nothing of his own a collection of twenty shillings was made for his behoof. He who sheltered or concealed a leper even for a single night was heavily fined.

Some of the Scottish leper houses had large properties attached to them, and must have supported their inmates in all the comforts of which the unfortunates were capable. Others were but slenderly provided, and their miserable inhabitants were obliged to depend upon charity. The act of Parliament "anent Leper Folk," passed in the reign of James I. ordained that "no leper folk sit to beg, neither in kirk nor kirkyard, nor other place within the burghs, but at their own hospital, and at the gate of the town and other places outside of the burghs." They were allowed to enter towns for the purchase of necessaries only on Mondays, Wednesdays, and Fridays, from ten till two o'clock, on condition that they wore a cloth on their faces, and rang a hand-bell or "clapped to give warning of their presence.

The leper hospital at Greenside, Edinburg, was founded in the year of King James' marriage to Anne of Denmark. The money for the building was given by Jno. Robertson, merchant in Edinburgh, and others, in fulfilment of some vow. At the opening of the hospital five leper inhabitants were consigned to it. Two of the wives of these lepers voluntarily shut themselves up in the hospital with their husbands.

The rules of this hospital were probably more severe than those of other leper houses. The inmates were forbidden to go beyond the gate by day or night, work-day or holiday, on pain of death. At the gable of the hospital stood a gallows in perpetual readiness for hanging any leper who might venture forth. The rules of the house enjoined, "That the said persons and each one of them live quietly, and give no slander by banning, swearing, fighting, scolding, filthy speaking, or vicious living or any other way, under the pains to be enjoined by the (town) council. That there be appointed an ordinary reader to read the prayers every Sabbath to the said lepers, and a commodious place appointed to the said reader to that effect."

By this time, it would appear that the disease was on the wane, for in little more than sixty years after the opening of Greenside leper-house, the magistrates ordered its roof to be taken off, and the wood and slates to be used for repairing the town mills and other public buildings. The stones of the edifice itself, and of its garden wall, were applied to similar purposes.

A leper was held to be a man dead in law. He was incapable of inheriting, and lost all his civil privileges.

On the day that he was put into the hospital, the burial services were performed over him. A priest in surplice and stole went to the leper, and began the dismissal ceremony by exhorting him to suffer with patient and penitent spirit the incurable plague with which God had stricken him. He was then sprinkled with holy water, and conducted to the church, the usual funeral verses being chanted on the way. Arrived in the church, the ordinary dress of the leper was taken off. He was then wrapped in a funeral pall, and placed corpse-wise before the altar on two trestles, while the mass for the dead was sung over him. After this he was again sprinkled with holy water, and led to the hospital. A clapper and "cop," or bell and dish, a stick,

a cowl, and a leper's dress were given him. Before leaving him the priest solemnly interdicted him from appearing in public without his leper's garb—from entering inns, mills, churches and bake-houses—from touching children or giving them anything which he had touched—from washing his hands or anything that pertained to him in the common fountains or streams—from touching in the market the goods which he wished to buy with anything but his stick—from eating or drinking with any others except lepers—from walking in narrow paths—from answering those who spoke to him in the roads or streets, except in a whisper, that they may not be annoyed with his pestilent breath and infectious smell. Last of all, the priest closed the ceremony by casting a shovelful of earth on the leper's body."

By the foregoing it will be seen with what care lepers have always been isolated in Great Britain, and to what causes the presence of the disease and contagion are so rare.

Now, touching upon the case of the death of Father Damien from leprosy, while engaged among the lepers. Dr. Bulkley quotes the doubts of Dr. Rigg, of Trinidad, concerning the contagiousness, while he also expresses his own, yet he says in the course of his paper, Father Damien "may have imbibed the leprosy germ in water, food, or air," but he thought the probable source of the infection was through mosquito bites.

For all practical and hygienic purposes it is quite needless to differentiate between contagion and infection. Sufficient for either question if admitted, is segregation, and all other quarantine measures to stamp out the disease.

The *N. Y. Medical Record* says editorially in its issue of Jan. 23, 1892, "There are not many lepers in New York, but there are too many." It is needless to say that from Pittsburgh alone there are at least fifty persons who visit Havana, Cuba, during every winter, and from Pennsylvania there are probably 200. The laws concerning isolation of lepers in Havana are disgustingly and perilously lax. Many years ago there was a wealthy leper who died in Havana, and who endowed a hospital for these unfortunates. As a part of that hospital there is a spacious shrine, or church, where inmate lepers and outside citizens meet Sunday after Sunday to worship. True, the lepers are not generally allowed outside the iron gratings of the porch, but they sit inside in crowds, and traffic in the closest possible proximity, and talk at will with their friends and loungers on the spacious steps, through the iron bars. Little children in crowds play about them on the steps, and witness the public swimming of the horses in the surf in front of the leper hospital, and, during several of my visits, a game of base ball was going on in front, and the usual crowd swarmed as lookers-on upon the hospital steps.

The public are admitted to worship in the lepers' church without restraint. At my visits the lepers gathered around me closely, and many offered freely to exchange their small and filthy paper money for silver, all willing to submit to any professional examination in their earnest desire to get relief. It is needless to say that the infected paper money finds its way into the pockets of the general public, and becomes a fertile source of contagion and infection.

I have been very much interested in the case of Joseph Miller, one of the survivors of the massacre of the crew of the filibustering ship, Virginius, in 1872, who was a leper inmate of the hospital. His name has been corrupted into Amelio by the Cubans. At the time of his rescue, he was a hale and hearty dark mulatto, but thirteen years of leprosy had turned him white; it has also made him handless, footless, sightless, noseless; it has left him without ears; it has left him without what would be recognized as a human voice; it has left him a hideous, ghastly creature, without hope in life; a mere thing, whom to look at is to make the stoutest heart shudder; whom to touch is to take the greatest possible risk of contagion that is sure to destroy. And such destruction. No other cruel thing known is so cruel, a weary journey of years, with weary limbs over which there is no power; shunned as no other being is shunned, cast out as unclean, to await the day when the horrible, hideous mass of decay will cease to live.

Whatever be the pathology of leprosy, there can be no doubt that it is a disease affecting nutrition, and which does its deadly work by absorption or ulcerative absorption of the tissues. For example, in the early cases, there will be seen on close inspection, a slight tumefaction of the skin and cellular tissue at a point on the ear, or nose, or limb. Later on there will be a gradually encroaching constriction at or near the point, and a slow absorption or amputation of the member or part. In some other early cases there is a strange alteration in the countenance and plaques of skin on the face and body, altered and bleached, or rendered livid by defective nutrition, or local inflammation.

The uninitiated might suspect syphilis, but when once seen and studied in its manifold

forms it can scarcely be mistaken. The limits of time and the subject announced, as the order of this meeting, prevent me from going farther into the subject at present.

A HISTORY OF A CASE OF DOUBLE PNEUMONIA ILLUSTRATIVE OF THE ABORTIVE TREATMENT.*

By ADOLPH KORNIG, M. D,
PITTSBURGH, PA.

The following case of pneumonia may perhaps be deemed worthy of recital before this society. I present it for your consideration and comment. Be the initial cause of pneumonia whatever it may, I am firmly convinced that the consolidation of the lungs is due to excessive efforts on the part of nature to repair the damage that has been done to the extraordinarily vascular lung-tissue, and to guide, or more properly, to restrain, the reparative forces, is the course that would seem to be indicated in the treatment of acute lobar pneumonia. In exemplification of this line of treatment of an acute pneumonia I submit the following history: One week ago to-day at 8.30 o'clock in the morning I was called to see Mr. J. R., aged 37. The night previous, while conducting the calcium light arrangements in one of the theatres, he experienced acute shooting pains in his chest, but remained at work till the conclusion of the play. Shortly after arriving at his home, about one o'clock, he was attacked with a severe chill and suffered intense pain about the region of, and somewhat inferior to the left nipple. From that time till I saw him he suffered unremittingly, in spite of thorough application of mustard. His breathing was so difficult that the first glance was sufficient to locate the cause of his illness in his chest, and closer investigation revealed the following conditions: Pulse 108, temperature 102½°, face flushed, respiratory movements very painful and abrupt. Auscultation over the front of the chest revealed roughened respiratory murmur, but on account of the suffering of the patient the physical examination of the lungs was not very perfect. A rather profuse and extraordinarily well marked rusty expectoration, however, satisfied me as to the condition of the lungs when conjoined with the other superficial symptoms. The cough, by reason of pain, was suppressed as much as possible. The first requisite to my mind was to relieve the pain, which was accomplished by a hypodermic injection of one fourth grain of sulphate of morphine and one one-hundred and fiftieth of a grain of sulphate of atropine. The second indication to my mind was to divert the blood stream and reduce the heart's action. With this end in view I gave him a hypodermic tablet of hydrochlorate of apomorphine of the strength of one-tenth of a grain. This I gave dry on his tongue and it would, I hoped nauseate him somewhat and initiate diaphoresis. I then wrote the following prescription:

℞ Tincturæ veratri viridis.....gtt. L.
Sodii salicylatis..... ..... ʒ iv.
Syrupi senegæ.....f ʒ iij.
Aquæ menthæ piperitæ q. s. ad f ʒ iij.
M. Sig. A teaspoonful every 2 hours.

Being a man of vigorous health, weighing about 165 pounds, I considered two drops of the veratrum none too much, even conjoined with the ten grains of salicylate of sodium every two hours. The salicylate was added for the reason that some five or six years before I had attended the same patient through an attack of acute articular rheumatism, and thinking a similar influence might possibly be associated with his present illness it was added for both its anti-rheumatic and its its diaphoretic and heart sedative action.

The first dose of the prescription mentioned was given him about nine o'clock. At 3.15 P.M. he was bathed in perspiration, earning his life by the sweat of his brow, as it were; his pain was less severe, pulse 98, temperature 100°, and his cough was somewhat relieved. His expectoration was strongly tinged with a rusty color. During the time of my visit he became sick at the stomach, and vomited some grumous fluid, evidently the result of the apomorphine administered earlier in the day. At 10 P.M. his pulse was 88, temperature, 99¼°, pain much relieved, face less flushed, but the perspiration was still profuse. I ordered the mustard to be reapplied.

Feb. 10. 10 A.M. Pulse 80, temperature 98¼°. Countenance almost normal in expression and color. Sputum somewhat less markedly tinged, cough slight, pain produced only on deep inspiration, slept well during the previous night, diaphoresis still profuse, urine highly colored and viscid. I ordered a solution of citrate of magnesium in wineglassful doses to quench thirst and relax bowels. Thinking the severity of the attack overcome, the veratrum and salicylate were reduced to one-half the former dose.

Feb. 10. 6 P.M. Pulse 80, temperature 99½°, face a little more flushed, cough moderate, sputum rather more deeply colored. Full dose of the veratrum again resorted to. Diaphoresis less profuse.

*Read before the Allegheny County Medical Society.

Feb. 11. 9.30 A.M. Pulse 72, temperature 98½°, patient passed a comfortable night, slept considerable, cough slight, sputum still red but more faintly so, diaphoresis slight, face almost natural in color. During the past 48 hours, the patient was so moist with sweat, and was withal doing so well that it was thought best not to subject him to a physical examination of his chest. At this time, however, an examination was made, and the base of the left lung, posteriorly, was found somewhat dull on percussion, and over an area of about the size of a hand distinct crepitant rales were heard; on the right side over a smaller area the same condition was discovered, but the rales were more of a submucous variety. The fifty drops of tincture of veratrum viride and the half ounce of salicylate of sodium being exhausted, the prescription was ordered refilled, and continued in slightly reduced doses. Another bottle of magnesium was also ordered.

Feb. 11. 6 P.M. At this time the patient was seen by Dr. Pettit, who found his temperature to be 100⅛°, and pulse 73. The crepitant rales on both sides were also noted by him. Diaphoresis and cough slight, pain almost absent. The pulse being reduced to about normal, he lengthened the interval between the doses of medicine to three hours.

Feb. 12. 10.30 A.M. Pulse 64, temperature 98°, patient rather pale, but feels well, expectoration still colored, cough less frequent. no pain, crepitant rales more moist, though still well marked. I discontinued the veratrum and salicylate, substituting for it the following prescription:

℞ Potassii iodidi.....5 i
Syrupi pruni virginianæ.....
Aquæ Foeniculi aa.....f 3 iss.
M. Sig. A teaspoonful every three hours.

Feb. 12. 6 P.M. Pulse 72, temperature 98¼°. General condition excellent. Patient begins to desire food.

Feb. 13. 11.45 A.M. Pulse 60, temperature 98°, cough rather increased, but expectoration more scanty though still tinged with yellow, crepitant rales still recognizable on both sides, though more moist in character. The medication was reduced to one-half teaspoonful every four hours, and the patient was allowed to sit up part of the day.

Feb. 14. 5.30 P.M. Pulse 64, temperature 98¼°. The patient sat up all day. His appetite was good, and he was without pain. His cough was almost voluntary, but at the base of the left lung slight mucous rales could still be heard. His expectoration was colorless, and his general condition, aside from the reduced pulse rate, normal.

In the absence of consolidation and bronchial breathing some may perhaps be inclined to doubt the genuineness of the pneumonia, but when we consider the powerful influence to which the patient was subjected prior to the time when these symptoms could have been developed, their absence is easily explained. The subnormal temperature and especially the subnormal pulse, after the cessation of the inflammatory process might be considered analogous to the hypnotic, or even narcotic effect often seen after the passage of nephritic calculi where a powerful anodyne was administered, during the passage of the calculus, without, perhaps, entirely allaying the excruciating pain.—(*For discussion see Society Reports.*)

POST-PARTUM HÆMORRHAGE.*

By ROGER WILLIAMS, M D.,
PITTSBURGH, PA.

I merely desire to call your attention to a few notes on the subject of post-partum hæmorrhage, with a view of presenting a subject of interest to all engaged in the healing art, and calling to mind the conditions that eventuate in the great hæmorrhages following delivery. There is no time when action is more promptly required, and knowledge and wisdom brought into play, than, when alone one is brought into the presence of post-partum hæmorrhage. It is unnecessary to present the picture, for one experience traces as with a stylus the tablets of memory more vividly and truly than ever artist's fingers wrought, and the whole play is necessarily so briefly enacted that we recall each incident, as we would describe a landscape seen in the lightning's flame. There is no emergency in the physician's life that gives less time for consultation and reflection, and no time more exacting to do the right thing, at the right time, and in the right way. Post-partum hæmorrhage is one of the most frequent complications of delivery. Call to mind, if you please, the many conditions you guard against in a labor about which you have doubt, and, in a vast majority, post-partum hæmorrhage is first to be feared. There is something more than intuition that places one on guard, for in the vast majority of subjects to this complication we find indisputable indices pointing to the subject in question. The patient, by reason of our wrongly-directed civilization and her whole surroundings, has engrafted a lax habit of body, inviting uterine inertia, and as a conse-

* Read before the Allegheny County Medical Society.

quence, post-partum hæmorrhage. We find illustrations of this in the upper ranks of life for they are most prone by reason of the demands of society. Education plays a part also, in inducing a premature and unhealthy development; and in support of this, I call to mind a home, almost palatial in its furnishment and surroundings, where a subject of post-partum hæmorrhage resided, and the intellectual food for thought was furnished by Boccaccio and the Queen of Navarre. Comment is unnecessary, for to the young ladies of that home, so surrounded at a period of life when quiet is most essential, the reading of such books is but the sowing of dragon's teeth, with the harvest in anticipation. Among the causes contributing may be mentioned the site and size of the placental attachment. A placenta attached to the fundus may have slight uterine attachment, and the uterine sinuses closed by nature's processes. Where the placenta is thin and covers a great surface, we may have ecstasis of the uterine vessels, and as a result, hæmorrhage. Local œdema, induced by perverted secretion, and inflammation, may prevent contraction, and as a result, we have immediate hæmorrhage. Complication to the funis, where it is interfered with and shortened, may cause a too rapid placental displacement, and therefore profuse hæmorrhage even before the child is extruded from the maternal parts.

A few years ago I delivered Mrs. G.—a multipara—and the cord, beside being tied in a knot, was entwined around arm and neck, and, during labor, the placenta was in part detached, causing a very great hæmorrhage. One peculiarity about this patient was her daily potations, which consisted of 16 ounces of tincture of opium, which she obtained clandestinely, and managed to keep her vice secret, until her maid was invited into my office, and the liquid measured not only one time, but many.

Retained portions of placenta is a frequent cause of post-partum hæmorrhage. I call to mind a case that occurred in my practice during my residence in Philadelphia. Mrs. S., 4½ months in the family way, was pushed off the pavement by a swinging gate, and fell in a sitting posture to the gutter. She promptly aborted, and as the placenta could not be immediately taken away, she suffered profuse hæmorrhage, which lasted until the placenta was expelled.

There may be a proliferation of the placental vessels constituting an extra or supplementary lobe, and the retention of this even after the placenta is removed will cause profuse hæmorrhage. Plural births, with double placentæ, is not an unfrequent cause of post-partum hæmorrhage, for at times the uterus seems to be irresponsive to all our efforts, and a hæmorrhage beyond what we desired is the result. I call to mind a case in illustration: Mrs. G. was delivered of twins, and the delayed second delivery was caused by an inertia induced by a beginning cancerous growth. The last delivered child was in part covered by a fleshy mass not unlike placenta, and was born dead.

Laceration of the cervix is a cause of post-partum hæmorrhage not infrequently. At times the structures of the uterine neck are hard and brittle, as well as unyielding, and, during labor, are apt to suffer to a greater or less extent. Mrs. W., a patient of mine, was delivered during my attendance at the A. M. A., at Nashville, and suffered an extensive laceration of the cervix, which was the immediate cause of an extensive hæmorrage controlled by styptic injections and plugging.

Lacerations in the vulval canal are not unfrequently the cause of violent and prolonged hæmorrhage. Mrs. D., a primipara, was delivered by me in December last, and there was a band of tissue broad as a common lead pencil joining the labia minora, which had escaped my examination, and when labor was completed the torn end of this small impediment caused quite a hæmorrhage, which was, with difficulty, controlled by applications of Monsell salt.

Growths within the uterus, even when too small to be detected during labor, are oftentimes the cause of alarming post-partum hæmorrhage.—I saw a case of this character with Dr. McNeil, the history of which he has kindly furnished. Mrs. K., a German, aged 38, confined December 16, labor lasting 24 hours, antero-posterior diameter narrow, delivery with instruments, and nothing marked the labor out of the natural order until the 11th day, when violent hæmorrhage occurred, keeping up until the patient was almost exsanguious. Prompt injections of hot water with vinegar, and teaspoonful-doses of ergot, relieved the hæmorrhage, and expelled a small fibroid, which was the cause of hæmorrhage. All went well until December 31, when during one of the quick atmospheric changes, the patient had a chill, rise of temperature, and died with pneumonic congestion January 5th.

As post-partum hæmorrhage is generally a preventable trouble, and where it often follows in a physician's path, rendering such a one open to censure for neglect or want of

knowledge, I claim your indulgence in this paper which may appear too long and tiresome—and yet we all have interest in a subject of such vital importance, not only to friends and family, but to ourselves, and this is my only excuse.

The character of a contraction has much to do with post-partum hæmorrhage. Admit we have a perfect contraction immediately after labor, if it is not permanent, and tonic, the relaxation may induce a fearful hæmorrhage. Post-partum hæmorrhage and permanent contraction are incompatible, I will admit, yet on examination one hour after labor and finding the uterus soft and flabby, and where coagula have not formed in the uterine sinuses, hæmorrhage will surely result.

Nature has her own way of controlling hæmorrhage by contractility of the uterus, and by plugging of the orifices of the uterine sinuses; and to assist by art when nature fails, is not an ignoble part the physician plays in attendance upon labor.

Not long ago, a physician left the bed-side of a patient with a violent post-partum hæmorrhage, with hurried direction to those who could not do what he should have done, in a fruitless quest for an instrument for transfusion. Had he gone for wings, in order that she might rise into the circumambient clouds, he should have been held less censurable, for when he returned life and hæmorrhage both had ended.

I need not speak of the secondary causes of hæmorrhage at great length, for that man who is not awake to the importance of the uterus worn out in a prolonged and exhausting effort in expelling the fœtus, or the uterus over-distended by excessive amounts of liquor amnii, or the consequences of a multiple birth, should not practice the obstetric art. Rapid emptying of the uterus is—excepting when filled with clots as a consequence of uterine hæmorrhage—baneful, jeopardizing and unskilful, and to do this to the over-distended uterus is criminal. The walls of an over-distended uterus are, to all intents and purposes, as paralyzed walls, and when the shock comes from relief of distension, it is the rule to expect retardation in contraction, and as a result, hæmorrhage of a greater or less extent.

The law is individual and not collective; and every mother is subject to the law controlling her case. True, there are principles governing, and likewise it is true we should be interpreters of the same, and should be ready at the instant to assist the tired and waning energies of the one harassed by the prolonged and exhausting pains of labor. But how many times is it true that we have hastened labor injudiciously, and reaped as the reward some complication that should not have existed?

The over-distended uterus should be relieved on the eve of labor by careful and minute rupture of the membranes, to allow the waters to slowly drain away. I know the ground taken is dangerous, but I am supposing judicious action, and there are examples of such action that have been praiseworthy to the operator, and to the one operated upon, helpful. I beg leave to cite an illustration: Mrs. P., enormously distended, a sufferer from ever-present pain, sleepless, and in constant dread lest she should never arrive at the day of acchouchement, was advised to have the sac of waters carefully ruptured; for two days there was a constant flow, and at the end of that time she went into labor, and was delivered of twins, one weighing 9¼ pounds and the other 8½. The uterus was firmly held for an hour to guard against hæmorrhage impending, and she made a rapid convalescence. An over-distended uterus is always a dangerous uterus, and should never be left until every indication is given that no emergency arises, especially as to hæmorrhage; for the greater number of deaths resulting from hæmorrhage during the last fifteen years in the Liberty Valley have been from this cause.

I am indebted to a brother practitioner for the following: Mrs. W., aged 23, delivered in November, 1891, labor normal, and of six hours duration; uterus greatly distended by amniotic fluid; secundines removed without trouble. Four hours after labor, profuse hæmorrhage set in, leaving the uterus spongy and enlarged. Contractility of the uterus weak, and as the patient could not take ergot, the hæmorrhage was kept in abeyance by injections of hot water for three hours, when it returned, with alarming conditions. Clots were speedily removed and warm water injected, controlling the hæmorrhage, but the patient was exsanguious, weak, and exhausted. Digitalis and stimulants were freely used, but the patient died on the tenth day from complication referable to the lungs. There was not at any time septic trouble.

Irregular contraction is a cause of post-partum hæmorrhages not uncommon. Part of the muscular fibres are relaxed, whilst part are in a state of contraction; the former often over the placental site, and is the cause of considerable hæmorrhage. By palpation this condition is easily discerned.

Hour-glass contraction is also a cause of post-partum hæmorrhage; rare it is true, yet nevertheless occurring. This condition follows often the obstetrician, who, by efforts of traction, excites uterine contraction at the seat of irritation—often the placental attachment, and many times the internal os, and, as a cause we have a diaphragm temporarily placed, with placenta in part or wholly included within the uterus, and hæmorrhage of a greater or less extent resulting. This condition rarely, if ever, follows after efforts of placental expression, and as this form of delivery of the after-birth grows into favor, hour-glass contraction grows less.

Encystment of the placenta is one of the rare complications of labor, and when it occurs, the placental site remains more or less paralyzed, whilst the remaining muscular fibres are in contractility. This form of trouble in the delivery of the after-birth is apt to be mistaken for adherent placenta, and oftentimes a part of it is left intra-uterine, as a result of wrongly directed effort, and hæmorrhage results, complicated at times by sepsis.

The placenta and membranes, and also the decidua, may be the seat of calcareous or fibroid degeneration, or the decidua may be abnormally thick. When an accident of this character to a part of the placenta or its membranes occurs, we have a cause of irritation not unlike a foreign body placed against the maternal tissues, and as a consequence, loosening of attachment in part, or an inflammation that causes adherent placenta. I think the many cases of adherent after-birth can be traced to one of the conditions mentioned; but, be this as it may, the hæmorrhage in this complication is not to be lightly considered, for the placental site is in a state of irritation, and its muscular fibres will respond freely.

Concealed hæmorrhage, following delivery, is a subject of interest to all. That fatal hæmorrhage of this character exists, many here will attest, and the obstetrician should ever be on guard. The flabby uterus rendered insensible, and worn out by long continued labor, may, by bleeding within itself, rob its subject of life. The external evidences of hæmorrhages may be normal, but where there is evidence of hæmorrhage the practiced eye detects at once. The conditions leading up to this are referable to clots, and at times membranes acting as a valve within the internal os. Illustrative of this, I am furnished the history of Mrs. ——, delivered at Homewood, in the summer of '91, who passed through a normal labor until the ninth day, when her physician was sent for, and found her pale, weak and bloodless. A syringe and hot water removed two quarts of clots. Phlebitis complicated the case, but the patient recovered.

Patients constitutionally predisposed to flooding are perhaps the most interesting of the class mentioned, and well merit the appellation of "bleeders." They follow the inclination of predisposition, in spite of every effort the physician puts forth, to a certain extent, and at times only mechanical pressure will relieve.

There are few sights more dreadful to look upon than the worst cases of post-partum hæmorrhage. A reign of terror ushers it into view, and that one who is at his post, equal to the occasion and to the emergencies that arise, has within him the elements of a hero. The pulse is a mere thread, or perhaps is imperceptible; syncope manifests itself, and with it is born a hope of thrombosis in the veinous sinuses; and yet there may be fatal syncope. Intense weariness and faintness comes on, and the patient, wildly tossing her arms, is with difficulty restrained. Respiration becomes gasping and sighing, suffocation seems impending, and the patient calls for more air. The skin is deadly cold, the face pale, and covered with profuse perspiration. If the hæmorrhage is not controlled, loss of vision, jactitation, convulsions, and death speedily follow.

The treatment in post-partum hæmorrhage, principally, should consist in using preventive measures. If the uterus is firmly held in contraction until the secundines are extruded, and the fundus held in the grasp of the hand until the first half hour is past; if only, when assured that permanent contraction has manifested itself, the binder is firmly applied, and, if a full dose of ergot is immediately given, cases of post-partum hæmorrhage would be much less frequent. If the history of the patient is one of post-partum hæmorrhage, then a greater care should be taken. It will be well to administer subcutaneously, a half hour before the supposed termination of labor, a full dose of ergotine. If then the os is dilatable, and one has prepared for the emergencies that *might* arise, rupture the membranes, and take advantage of every means to insure regular and, if possible, permanent contraction. If the pulse does not fall slightly below, or comes to the normal in 20 minutes after labor is completed, this in itself is indicative of inpending hæmorrhage, and then prompt treatment of tendencies, especially referable to relaxation, demands the intra-uterine administration of

remedies to control hæmorrhage. Ice, with uneven edges removed by immersion in hot water, carried to the fundus, and held until contraction is induced, or ice water—if the surrounding parts are protected—by injection, or water of the temperature of 120 to 130 degrees, by the same means, and persisted in until contractions are invoked. Absolutely hot water favors coagulation in the uterine sinuses, and in those nervously disposed, is a form of treatment suited. It is supposed that subcutaneous injection of ergotine has been used, or that ergot in the form of fd. ex. has been given in sufficient quantities. Antiseptic wool carried to the bleeding surfaces is to be used, and in the selection of remedies, there is the choice of dilute acetic acid, chloroform, or the mineral astringents. If a powder-blower is at hand, and the parts admit, the use of pulverized nutgalls will serve a goodly purpose, and is a safe means of arresting hæmorrhage. The application of tr. iodine is also efficacious, and can be readily applied on wool. Strength of the patient must be maintained, compensation for the loss of blood looked after, and to this end, injections of drachm doses of ether play a part, with the inhalation of nitrite of amyl, or the injection of stimulants. Alcoholic-saline intravenous injection gives back tension, and supplies, in part, the fearful waste. These failing, the abdominal aorta can be compressed, or the uterus held firmly by the hand sufficiently long to aid in the formation of coagula.—(*For discussion, see Society Reports.*)

INOCULATION OF PHYSICIANS WITH SYPHILIS.

Dr. James D. White, of Boston, says that he has notes of fifteen cases of syphilis in physicians who were inoculated upon their hands while engaged in professional duties. Three of these died from the disease. All of them suffered greatly in mind, and were more or physically disabled or disfigured for a time. He suggests (*Boston Medical Journal*): First, always wash one's hands immediately after an interview with a patient who has, or is suspected to have, syphilis, without regard to the condition of the parts touched, or even if not handled at all. This should be made an invariable custom. Second, the physician should regard every persistent sore upon himself, of whatever seat and however innocent apparently, as a possible lesion of tuberculosis or syphilis, and seek competent advice without delay. Such advice is never found at home.

SOCIETY REPORTS.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Scientific Meeting, February 16th 1892.

J. C. Lange, M. D., President, in the Chair.

Dr. Kœnig read a paper entitled "A History of a Case of Double Pneumonia Illustrative of the Abortive Treatment." (See p. 651.)

DISSCUSSION.

Dr. Rigg: I believe this is the proper treatment. It is the treatment that should be followed in pneumonia with very few exceptions. The selection, however of the particular cardiac sedative is the choice of the practitioner. I prefer aconite, but I will leave that entirely with the individual physician. In the early stage of pneumonia stimulants have been recently recommended and recently condemned; I think they are injurious; they are contrary to the effect you want to produce. I have been following that treatment for the last thirteen years, and I have no reason to regret it, no reason to believe that any other treatment I have seen, and have at times taken part in, is any better.

Dr. Duff: I was very much impressed with this case which is certainly well worthy of remembrance. My observation teaches me to believe that salicylate of sodium is one of the best remedies of this kind. I wish to call attention to the fact that salicylate of sodium is one of the most efficacious remedies in my hands, and in the hands of several practitioners with whom I have spoken on this subject. There is a condition in pneumonia analogous to that we have in rheumatism, and the operation of the medicine is to a certain extent in the same line.

Dr. Thomas: I wish to corroborate what Dr. Duff has stated, that salicylate of sodium is possibly one of the best remedies in pneumonia. In the *Pittsburgh Medical Journal* some years ago I gave the statistics of the continuance or the length of the disease, and the average limit of the disease as treated by salicylate of sodium. I look upon the disease as analogous in its character to rheumatism, and that both exist under a similar climatic condition, and that both require pretty much the one treatment. I do not remember what year my report was made, but if any of you wish to refer to it, you can get it in the journal published by Dr. Gallaher some years ago.

Dr. Daly: There can be no doubt that, viewed as a great controller of the heart's action in inflammatory diseases, veratrum viride is a very useful remedy. I have used it more or less for twenty years, but it has always occurred to me that a more important point, or quite as important a point, is to know when to abate its administration. It is so potent a remedy that unless good judgment is observed in abatement of the dose, serious harm may be done with it. I have for many years been in the habit of instructing the nurse to count the pulse, with the instructions that when the pulse fell to 95, with some moisture about the hands, to increase the interval of the dose and diminish its quantity to ½ or ¼ of whatever had been given, and with instructions that if the febrile action increased to increase the dose again.

With reference to the value of salicylate of sodium in pneumonia, I think many can testify to its value, but I presume it is of value because of the common origin, frequently, of pneumonia and acute rheumatism. I think every man who has been an observer in the practice of medicine for fifteen or twenty years, or even less, will come to the conclusion that many acute pulmonary affections, such as bronchitis and pneumonia, have their origin within the system, not without the system at all, from the retention of broken down products. What we may regard as a rheumatic condition may in one case produce rheumatism and in another case pneumonia, in another case rheumatic bronchitis, or even a rheumatic pleurisy; that I have demonstrated to my own satisfaction more than once, and therefore it is reasonable that salicylate of sodium gives such results as it does. It will also reduce temperature and the heart's action, and for prompt and efficient work it is very difficult to find a remedy equal to it; but one must know when to stop the remedy.

Dr. Borland: I have used tincture of aconite with about the same results as Dr. Kœnig has had with veratrum viride. Salicylate of sodium, in my experience has been satisfactory in many cases, but it is hard on the stomach, and for this reason I have not been able to give full doses. What is called salicylate of sodium, that preparation that is made use of in filling prescriptions, is a preparation I understand made from coal tar products, or, in other words, there is no true salicylate of sodium about it. Salicylic acid, which is made use of, is a synthetical product. I am in the habit of ordering the true salicylic acid and combining it with ordinary bicarbonate of sodium. I find that this combination is more easily borne, and has better effects.

Dr. Davis: I would like to state that I have never in private practice been able to give salicylate of sodium longer than twenty-four or thirty-six hours. In hospital patients, where we can control them, we can prosecute the administration longer, but I do not know a patient who can resist and will not resist after forty-eight hours. It is so repulsive that the taste is a factor in starting a rebellion in the stomach and palate of the patient.

Dr. Duff: Mr. Davis's remarks are certainly a revelation to me. As a rule, I have had patients taking large doses, very large doses, of it for a week at a time without any bad results.

Dr. Batten: I have been in the habit of prescribing salicylate of sodium in rheumatism, and I have often continued it for two weeks, and I have never found any bad results from the taking of it, or any effect on the stomach, nor found that my patient objected to taking it. I have thought that salicylate of sodium was pleasant to take.

Dr. Kœnig, in closing the discussion, said: I desire to recall the attention of the society to a statement that I made, which has, judging from the discussion, apparently been overlooked; it is namely: That the antiphlogistic action was initiated by apomorphine, one of the most powerful depressants and emetics in the entire pharmacopœia, and it probably had much to do with the abrupt termination of the pneumonia. I want also to express my appreciation of the danger that is associated with the administration of large doses of heart sedatives; for that reason I made three visits to this patient in one day. No doubt what Dr. Rigg and Dr. Borland stated, that many other remedies will accomplish the same result, is true. There are many roads that lead to Rome, though some may be more direct or otherwise preferable than others. Aconite or tartar emetic will accomplish the same result; but if I were to give aconite in sufficient amount to accomplish what the veratrum viride and salicylate of sodium did, I would want to sit at the bedside of the patient. I have no doubt it is an excellent remedy, more rapid in its action, and perhaps more certain, but unless closely watched, we unnecessarily risk the life of the patient. In veratrum viride there are two or more alkaloids, one of which is powerfully heart sedative, while another is emetic, but less marked so than the heart sedative one; before, however, the sedation can go to a fatal limit the emetic action is established and the stomach emptied of its remaining contents.

Dr. Roger Williams then read a paper on "Post-partum Hæmorrhages." (See page 652).

DISSCUSSION.

Dr. Davis: The doctor has not only opened the discussion, but he has so very thoroughly covered the ground that it leaves little room for any one to add anything, but rather repeat in the way of emphasis some of the statements he has made. There is one cause of post-partum hæmorrhage that I did not notice being mentioned, that is the use of anæsthetics in labor. I believe it is the experience of all that the use of chloroform or any other anæsthetic in labor, is very liable to leave the patient in such a condition that the normal stimulus of the last throes of labor are removed and a lassitude follows the removal of pain, so it is a question as to how to resort to anæsthetics. It is necessary to be very careful in following all the details the reader has mentioned, in regard to the pressing down of the uterus and holding it pressed and keeping it in observation all the time until the patient has rallied, and I think where this precaution is not observed, there are many cases of hæmorrhage as the result; not always fatal hæmorrhage, but a hæmorahage that would be avoided if these precautions were observed. The doctor has clearly outlined the magnitude and gravity of the diseased condition, because in a great majority of cases it is a diseased condition, a pathological condition, not a physiological one, and I know of nothing we are called on to attend that so alarms physicians and attendants as this. I recall the words of old Dr. Meigs when he so wonderfully demonstrated the condition. He would show us in so vivid a manner the accident; he would then mention the remedies to use, and he said after you have used these you will throw up your hands and wish to the Lord old Meigs was there. I tell you, it has come to us all over and over again, when these patients seem, in spite of all remedies, to resist every endeavor to bring that uterus down, we do wish for help from any source or from every source. I would like to emphasize the hot water. It is one of the more recent ones, and it is one I have had experience with myself. In hæmorrhage, where I have felt safe, I have introduced ice rapidly, large quantities and satisfactorily, but not so satisfactorily it seems to me, not so promptly and fully as in the use of hot water. Most houses now, at least all well-to-do houses, have syringes of some kind, and if this water has been thoroughly boiled and cooled sufficient for the purpose, it is disinfected by that means, and I think can be used safely in large quantities, and its action in causing contraction is very prompt, and even where that is not so prompt, it does constringe the vessels and at least the hæmorrhage is controlled.

Dr. Thomas: There is one place in the paper where the gentleman spoke of rupturing the membranes. Teachers of obstetrics advise not to rupture the membranes, but I hold and have always advocated such practice. I think after labor begins the sooner the membrane is ruptured the better, and in a large practice of obstetrics as a rule I have followed it. To produce artificial labor the membranes are ruptured, so I hold that after the full period of uterine gestation has arrived, the membranes are in the road. There is one other point the reader spoke of, and that is to give large doses of ergot. Now I think that is a mistake. If you give large doses you produce an exaggerated contraction, and if you have that, you necessarily have following an exaggerated relaxation, so that in giving it to control hæmorrhage, it is better to give small doses and give them oftener. If there is anything that raises large beads of sweat on a man's forehead, it is when he attends to a case of confinement, and after the delivery or before the delivery, he hears the blood rushing out. There is nothing in the entire practice of medicine that impresses a man more than that condition. Now you talk about ice, you may talk about syringes and hot water. If a man finds himself with such a case how in the name of common sense is he going to run and get ice, inquire of the parties if a syringe is at hand, and if not rush to the drug store and get one? The way the hæmorrhage flows out, if you wait your patient will be dead before you have these things prepared. Sometimes you can almost tell that a woman is going to have a hæmorrhage; I have done that more than once. Where I suspect there is danger of hæmorrhage, I take precautions beforehand to have a pint or two of vinegar. I do not tell this in the hearing of the patient, but I tell them I want a pint of vinegar and a clean kerchief or a small towel, and if I have hæmorrhage of that kind, I roll the towel around my hand, saturate it with vinegar, pass it up the uterus, and I have never failed to constringe the vessels and check the hæmorrhage.

Dr. Blume: The subject of post-partum hæmorrhage is certainly of importance to every physician. The doctor has fully given the different causes, as well as the treatment of this complication. I wish in the first place to call your attention to one point—

to the question—Is it possible to prevent post-partum hæmorrhage? My answer is, the proper management of the third stage of labor will render these accidents extremely rare. Unfortunately there is still a diversity of opinion as to what is the proper treatment in the third stage of labor. Some writers say the uterus must be grasped and firmly compressed as soon as the head emerges; some insist upon compressing the fundus as soon as the child is delivered. Some say it must be done about fifteen minutes after the delivery of the child; still others leave the separation of the placenta and its expulsion through the contraction-ring to the powers of nature. If you do this you do not need to be afraid of post-partum hæmorrhage; there will be very little blood lost under these circumstances in a very great majority of cases. It would lead me too far to demonstrate to you that this last view is the correct one. The observer will find that there is very little loss of blood, in some cases almost nothing; he will also find that the uterus remains more contracted if this plan has been followed.

As Dr. Thomas said, ergot, especially large doses of ergot, has the effect of over-stimulating. About three or four years ago I published a paper on this subject, and especially about the third stage of labor. I have not had one case of post-partum hæmorrhage within the last eight or nine years since I have been following this plan of treatment of the third stage of labor, I say of post-partum hæmorrhage, and I exclude all those hæmorrhages which arise from lacerations. As regards the treatment, I again agree with Dr. Thomas, that it is often impossible to use cold or hot water. You have not the time to do it. If it is some mild form of hæmorrhage compression of the fundus will arrest it; if it is a serious hæmorrhage, you lose too much time before you have it ready. If I had it to do, I would simply introduce my hand into the uterus, take the other hand and grasp the fundus and make a compression of the uterus. I think very few cases will resist this treatment. The best result has been obtained in various cases by tamponing the uterus and vagina with iodoform gauze.

Dr. Batten: I venture to say that if any of us had a case of post-partum hæmorrhage to-night, we would not likely do anything that has been recommended, because we have not the appliances nor have we the time to wait. I believe that the husbanding of the second stage of labor to prevent post-partum hæmorrhage, is as important, if not more important than the third stage of labor. In my career I have had but two cases of post-partum hæmorrhage. One was not a very bad case. The other was a very bad case, and the woman finally died. I was not there at the time the child was born, nor for an hour afterwards, and when I arrived at the patient's side I found her *in articulo mortis*. I had attended her in three previous births. In another case of post-partum hæmorrhage, a case I saw with another physician, we governed the bleeding by each alternately holding or pressing the womb well down in the pelvis and giving ergot. The moment either of us would take the hand off the uterus it would become flabby. I am a great advocate of the rapid delivery of the after-birth when the second stage of labor is complete. It is very important that the clots and all the membranes that might remain in the uterus be removed, and that the womb should be well contracted before putting on the bandage. I would object to giving ergot in any shape, either by injection or by the mouth before the child is born, because I think it would lead to difficulties afterwards that might otherwise be avoided.

Dr. Kœnig: I want to say a word in favor of that much-abused remedy, ergot. According to my understanding the difference between ergot and the natural contraction is that the contraction by ergot is continuous. If you get the uterus contracted by large doses of ergot it does not relax. I myself have seen very few cases of serious post-partum hæmorrhage. I am sure, however, that if I had ergot at hand, I would give at least half an ounce of the fluid extract as soon as the manual manipulations should have succeeded in bringing about contractions, and time could be spared to administer the medicine.

Dr. Macfarlane: There is just one thing I wish to speak of—the matter of ergot. It was thought it should be given in all cases, and I think there are those who rely upon ergot to the exclusion of other things. I agree with Dr. Blume that the proper way of treating a post-partum hæmorrhage is to induce contraction of the uterus by the introduction of one hand into the uterus and place ing the other one upon the fundus. I think the presence of the hand in the womb is sufficient. There is one thing I wish to commend to those who have not done much such work, that the doctor has made mention of in this paper, that is, the significance of a quick, rapid pulse. Though quick and rapid you may not have a post-partum hæmorrhage in the true sense of the word, but you are going to have a uterus that will relax again

and fill with clots and give you trouble; and there are those who give ergot under these circumstances, and especially beginners will give the patient a dose of ergot. The proper thing to do is to empty the uterus with a few fingers, and usually the contraction will be sufficient to check such hæmorrhages without any ergot at all. Mention has been made of the binder, and I know people who put it on with as much regularity as they say their prayers at night. I think with the average woman, by the time you raise her up and have that binder put underneath her, you will do more harm than good. Even in hæmorrhages of any kind, it it not the custom with me to put on the binder. Once you have the uterus contracted, and you remain by your patient a length of time to assure you it is permanent, I do not think there is any occasion for the binder. Dr. Thomas has stated here that the proper thing to do under any and all circumstances, if full term has arrived, is to rupture the membrane. I wish to take exceptions to it. A labor can be carried through to such time as it will rupture of its own accord, with much more comfort, and it is certainly easier on the mother's part to have a soft bag than a resisting bag.

Dr. Murdoch: No man should introduce his hand into the uterus, unless for some such grave accident as this post-partum hæmorrhage, and only then when the post-partum hæmorrhage threatens to be fatal. I mention this because the matter was vividly brought to my mind last night by a young practitioner, who told me that two weeks ago he attended a case in which there was post-partum hæmorrhage, and for the purpose of arresting it he called for a syringe, and he injected it with hot water and arrested the hæmorrhage; but in a few days the woman was taken with fever and died within a short time, of septic poison. Now, if this goes abroad that in cases of post-partum hæmorrhage, the practitioner is at liberty to take a cloth or towel and wrap it in his hand and saturate with vinegar and push it into the uterine cavity, practitioners who have not had as much experience as Dr. Thomas has, get to think that is the proper course to pursue. Some of them may think that the loss of a few ounces of blood after delivery justifies them in the use of some such means to arrest the hæmorrhage, and they may for a trivial trouble introduce that into the system of woman which may cause her death. It is a serious matter to introduce the hand into the uterus, and in injecting hot water in a hurry, nine times out of ten you will not get water that is boiled, but that which is filled with septic matter; and you may for the purpose of arresting a hœmorrhage that will not prove fatal inject it in the system and probably cause the woman's death. I believe that, generally speaking, the hæmorrhage can be arrested without such means, but there are occasions where it is probably justifiable, and I have myself resorted to it. I am a believer in hastening the third state of labor; I believe in doing it according to the method of Crede. I also agree with Dr. Macfarlane that the binder is an obsolete means of producing pressure, and is not worthless, but worse than worthless—it is a nuisance.

Dr. Duff: I cannot help allowing the words of Prof. Hersh to ring in my ears. "Where a second case of post-partum hæmorrhage follows a man, he is certainly ignorant or guilty of negligence." When I say this I do not for a moment entertain the belief that cases of post-partum hæmorrhage are not a necessity in almost, if not every man's practice; not inevitable, but they should not be frequent, if proper precautions are taken. There have been remarks here to-night suggesting the impossibility of having proper instruments at hand. One certainly has a right to speak disparagingly of a physician who goes on his round day after day and night after night, waiting on the mothers of our land, without having himself provided with those instruments and remedies which may become necessary in the course of his practice, without time to run around and hunt them up; and hence while a physician does make a very great display when he has a table in the room and places his instruments upon it, which I would condemn to a certain extent, he is certainly practicing obstetrics according to the line of his duty, in being prepared for emergencies. Coming to the subject of post-partum hæmorrhage directly, the doctor did not illustrate the difference between the different characters of post-partum hæmorrhage, and in the discussion almost all have spoken of post-partum hæmorrhage which comes from the detachment of the placenta. Hæmorrhages from laceration are of different character, and it is very important that we recognize this difference. I know of a woman who died not five miles away from here, because her physicians did not recognize the fact that the hæmorrhage they were endeavoring to control did not come from the uterus, but from laceration. They kept the uterus pressed down, kept it contracted, and applied lemon juice and hot water, but the hæmorrhage went on, and the woman died; whereas, if they had recognized the true condition and taken hold of that

uterus and sewed the rent, they could have saved her in all probability. Now, with regard to the treatment, the doctor did not distinguish between contraction and retraction, as an element in post-partum hæmorrhage. We have contraction and retraction, and if you have plenty of contraction and not any retraction, you will still have hæmorrhage from the uterus. With regard to the use of ergot, it will produce contraction, but it does not produce retraction, either of the muscles or the blood vessels, and when the contraction passes off, not having retraction, you are a little more likely to have hæmorrhage than if you had not given ergot.

There are some methods of treatment of post-partum hæmorrhage that have not been mentioned. The condition of the patient must be taken into consideration, as has been stated by some one, outside of the condition of the uterus. If hæmorrhage came on, I would take the forceps and pull the uterus down, and with a pair of forceps I would take gauze and push it up into the uterus, and the hæmorrhage in ninety-nine cases out of one hundred would cease. I would never hasten to turn the uterus inside out as do Koch and others. Another thing to be done is to make pressure. I believe Beringer and Foster advocate pressure upon the abdominal aorta, one through the uterus, and the other the abdominal walls, and forcing all the blood that remains in the woman's body up to the brain as much as possible. The subject is a very interesting one to me, and I feel of all the operations we undertake there is none in which we must be braver, bolder, and more determined, and more active.

Dr. Williams: I do not intend to take much of your time. In regard to the criticism of Dr. Thomas, I did not state any dose of ergot; all I suggested was the injection of ergotine, when we anticipated in a few minutes to half an hour labor would be over to get the effect of ergot. In regard to the use of ergot, I am a firm believer in its value, that it will produce contraction. Some criticisms have been made on the binder. I mentioned that after you were assured that you had permanent and constant contraction, the application of the binder would more firmly hold the uterus to its place, not to immediately apply the bandage.

DR. R. STANBURRY SUTTON.

Dr. Sutton has been elected Gynæcologist to the Allegheny General Hospital, Allegheny, Pa., and given a separate building for his work, which he has already begun.

SELECTED FORMULÆ.

HYDROPSY OF CARDIAC ORIGIN.

℞

Digital s leaves.....ʒ ss.
Boiling water.....ʒ viii.
Make an infusion and add citrate of caffeine .....ʒ ss.
Tinct. strophantus.....ʒ i.
Acetate of potash.....ʒ v.
Extract of licorice.....ʒ i.

S. The whole to be taken in spoonful doses within 48 hours.

—*Union Médical.*

DEPILATORY.

℞

Carbonate of soda.....ʒ j.
Quicklime (fresh).....ʒ ss.
Powdered charcoal.....grs. viij.
Glycerin—concentrated.....ʒ j.
Lard—dehydrated.....ʒ viij.

M. S. A. After this has been applied for ten days the skin assumes a rose tint, and the hair may be drawn out without pain. It is imperative that the quicklime be fresh, and the glycerin and lard contain as little water as possible.

QUININE FOR INFANTS.

Lutz has proposed the following formula, which masks the bitter taste:

℞

Sulphate of quinine.....gr. viii.
Dilute sulphuric acid, 1 per cent.....♏ viii.
Essence of peppermint.....♏ v.
Saturated solution saccharine.....ʒ iiss.
Water.....ʒ iii.

—*Gazette des Hôpitaux.*

CAMPHOR IN INFLUENZA.

Dr. Deveruk (*La Semaine médicale*, No. 45, 1891) recommends camphor as one of the best remedies in influenza and similar states. He used the following formula in over 150 cases:

℞

Alcohol camphorat.....grammes 8.
Syrup chloroform..... " 10.
Mucilag. gumm. tragacanth..... " 60.
Aquæ..... " 180.

A spoonful every two hours.

CHRONIC PRURIGINOUS ECZEMA.

Unna suggests the following ointment in cases of chronic eczema, where there is considerable pruritus and deep infiltration of the skin:

℞

Calcii chloridi liquidi.....grammes 40.
Olei cadini..... " 10.
Lanolini..... " 20.
Unguenti zinci oxidi..... " 30.

—*L'Union Médicale*, Dec. 22, 1891, p. 899.

DISINFECTANT MOUTH-WASH.

The following combination has been found both a pleasant and efficient disinfectant:

℞

Thymol.....gr iij.
Benzoic acid..... " xl.
Tincture of eucalyptus.....ʒ iij.
Essence of peppermint.....♏ x.
Alcohol.....ʒ iij.

M. Sig. Pour enough in a glass of water to render it turbid, and use as a mouth-wash.

—*Thomas.*

CHLOROSIS.

Dr. Pick (*Wiener klin. Wochenschr.*), basing his procedures upon the supposition that chlorosis is due to an auto-intoxication by toxines absorbed from the stomach, washes out the stomach, in the morning, and administers immediately afterwards, some preparation of iron. With this treatment he has been able to get results in three or four weeks, where, under the ordinary method of administering iron, no results would be obtained for months. If this fails he prescribes:

℞ Creasote.....cgms. 5.
Sugar of milk..... " 30.
Sufficient for one capsule. Take one capsule immediately after each meal.

EXPECTORANT.

℞ Tr. opii camph.....ʒ i.
Srt. ammon. arom.....ʒ i.
Ext. ipecac fl.....ʒ ss.
Syr. prim. virg.....ʒ i.
Aquæ, ad.....ʒ viii.
M. Sig. A teaspoonful three or four times daily for a child.

CHILBLAINS.

Morrow prescribes:

℞ Carbolic acid,
Tannic acid.....āā 1.
Tincture of iodine..... 2.
Vaseline (albolene)..... 30.
M. Sig. Apply to the affected parts three or four times a day.

HYDROCHLORIC ACID IN DIPHTHERIA.

Roux and Yersin have shown that the virulence of diphtheritic toxines may be greatly diminished by the local application of small quantities of acid. Krazenski employs hydrochloric acid in the following formula:

℞ Perchloride of iron.....ʒ i
Medicinal hydrochloric acid.....ℳ xv.
Distilled water.....ʒ vi.
S.—A teaspoonful every 15 minutes for four doses, then every 30 minutes for 3 or 4 hours, finally every hour.

℞ Perchloride of iron.....ʒ ii.
Hydrochloric acid.....ℳ xv.
Distilled water.....ʒ i.
S. Apply locally every two hours.

—*Times and Register.*

FOR IRRITABLE HEART.

Dr. J. Hobart Egbert states that a young girl whose irritable heart did not improve under digitalis and belladonna (*Notes on New Remedies*) improved rapidly under the following:

℞ Chloralamid.....ʒ iv.
Tinct. belladonnæ.....ʒ ij.
Elixir simplic..... q. s. ad ʒ iv.
M. Sig. Teaspoonful three times daily, between meals and at bedtime.

And

℞ Ferri et quiniæ citrat.....ʒ iv.
Tinct. nucis vomic.....ʒ iij.
Syr. simplic..... q. s. ad ʒ vj.
M. Sig Teaspoonful after meals.

SEA FOAM.

(DRY SHAMPOO.)

℞ Alcohol.....ʒ vij.
Water.....ʒ x.
Ammonia water.....ʒ j.
Cologne.....ʒ j.
Tinct. green soap.....ʒ iv.
M. Use as a shampoo and wash off with clear water

SCROFULOUS OPHTHALMIA.

The following recipe was much used by the late Dr. C. Fronefield in this troublesome disease:

℞ Ext. belladonna.....gr. v.
Chloroform.....ʒ ss
Aquæ.....ʒ viij.
M. Sig. Wash two or three times daily.

Also:

℞ Quin. sulph.....ʒ jss.
Liq. potass. arsen.....gtt. x.
Ext. hyoscyami.....gr. iij.
M. et fiet. Pil. 60. Sig. One ter die.

ANÆMIA.

For a young girl fifteen years of age, Prof. DaCosta prescribed:

℞ Sodii arsenit.....gr. ¼.
Ferri sulphat..... " ij.
Potassii carbonat.....gr. ij.
M. One pill three times a day, the dose to be gradually increased.

Also a diet of fresh animal food, with green vegetables by forced feeding (four or five meals in the twenty-four hours), or if quantity is an objection, the freshly extracted juices of meat may be given. Red wines might also be given with advantage, and the patient should lead an out-door life.

ASTHMA.

Dr. Huchard, of Paris (*Le Bulletin médical*, No. 9, 1892), praises the following formula in the treatment of asthma:

℞ Iodide of potash,
Tinct. of lobelia,
Tinct. of polygala.....āā grammes 10.
Extract of opium.....dgms. 10.
Water.....grammes 900.
A teaspoonful morning and evening in a quarter of a glass of water.

The addition of the opium increases the tolerance of the stomach for the alkaline iodide; the iodide of sodium may be used fully as well.

VULVAR ECZEMA.

Lusch advises:

℞ Bicarbonate of sodium.....grammes 8.
Bicarbonate of potassium..... " 4.
Neutral glycerin..... " 6.
Tincture of opium..... " 8.
Water..... " 250.
Ft. sol. For use as a lotion morning and evening. After using the lotion apply a powder composed of starch 98 parts and powdered camphor 2 parts.

—*Le Progrès Médical.*

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LEADING ARTICLE.

THE THERAPEUTIC USES OF IODOL.

Iodol is not one of the many new drugs that are taken hold of and used by the practising physician and then laid aside soon afterwards, not only as valueless but sometimes as dangerous remedies. Since its introduction in 1885 by Vulpius and Mazzoni, iodol has invited considerable attention, and to-day it may be said that the drug has, in conformity with its claims as a therapeutic agent, an undoubted value and obtained a permanent place in practical medicine. Indeed, few of the newer drugs have had such an extensive trial with such excellent general results. It has been employed both internally and externally, and has been found to be of special value as an antiseptic and alterative. As a whole, there is sufficient evidence to prove that it possesses superior advantages over corrosive sublimate, and especially over iodoform. A study of the literature regarding the therapeutic uses of the drug in question will sustain these assertions.

Iodol was first brought into notice by Mazzoni who largely used it in syphilitic disorders, adenitis, periadenitis and chancres, which were greatly benefited by it. Locally applied, it was found serviceable in the treatment of large suppurating ulcers, in which, in the course of 24 hours, it not only produced a lessening of the discharge but also a favorable change in the morbid processes, followed soon afterwards by a healthy granulation and cicatrization. As an antiseptic its good effects have been observed in erysipelas and diphtheria. Later studies have led Mazzoni to consider iodol an excellent remedy in the treatment of hydrocele, and of synovitis of the wrist-joint, particularly in the latter disease after the acute stage has passed. In such instances, pain and the disagreeable sense of heat have disappeared within 24 to 48 hours. Two cases of hydrocele were radically cured in 2 and 4 weeks respectively by the exclusive use of injections of a solution of the remedy.

Wolf has noticed that under iodol venereal ulcers heal more slowly, than under iodoform, but that, on the contrary, they do so more

rapidly when the lesions have been previously treated with salicylic acid.

From a series of clinical observations, Schmidt has found iodol superior to iodoform in the treatment of large suppurating surfaces, and in fistulæ. Unlike iodoform, iodol does not produce concretions on the borders of the ulcers, and thus it was seen that the healing was enhanced rapidly by the early formation of healthy granulations. Though extensively used by this author, in the form of powder and solutions locally applied to large suppurating cavities and surfaces, he has never observed symptoms of poisoning, as is of frequent occurrence in the case of iodoform.

Piermarino has reported success with the use of the drug in a large number of cases. Unhealthy granulations of the neck of the uterus, which came on as a consequence of a chronic endometritis, yielded completely to the simple application of an iodol ointment. The author cites the case of a child, four years of age, suffering from an umbilical phlegmon followed by gangrene, and by abscesses of the mammary region and suppurations of the root of the finger nails; powdered iodol, used locally, effected a radical cure. Identical results have been obtained by Piermarino in the treatment of fistula in ano, and gangrene of the vulva, when other measures had failed to do any good. A case of obstinate metrorrhagia, resulting from a chronic endometritis, was greatly benefited by the introduction into the uterine cavity of the powdered drug. These, indeed, are but few examples out of a large number of cases reported by various writers, cases in which the beneficial effects of the local use of iodol have been apparent.

Its uses, however, have not been confined to this field of action, and, as we have stated before, the agent under consideration has been employed internally with most satisfactory results. Thus, Pick, who has used it locally with decided advantage in the treatment of simple blenorrhagic catarrhs of the vagina and cervical canal, of suppurating and indurated ulcers, and other local troubles, has likewise extensively employed the drug internally. The author found that it was well tolerated by the stomach and that even in doses of from 2 to 3 grammes a day, it produced no deleterious effects, with the exception occasionally of a slight cephalalgia and looseness of the bowels, both of which, however, passed off rapidly. He also notes that its absorption is prompt and followed by the early appearance of iodine in the saliva and urine; that it was superior to iodide of potassium, especially in those cases of obstinate tertiary syphilis in which a prolonged action of the iodine is desired; and that, unlike the potassium salt, it did not produce stomatitis or nasal catarrh, even when large quantities were being eliminated by the saliva.

The same satisfactory results have been obtained by Cervesato, who more extensively, perhaps, than Pick, has employed the drug internally in a variety of diseases. The Italian writer has seen iodol do good in the various forms of scrofula, in scrofulous dermatitis, in scrofulous diseases of the mucous membranes, in the non-suppurating indolent tumors of the lymphatic glands, and others. In affections of the respiratory tract such as primary laryngeal tuberculosis, acute and chronic catarrhal laryngitis, dry suffocating catarrhs of adults, and in dry bronchitis of infancy, iodol, according to Cervesato, has exerted a beneficial influence. In three well defined cases of pleural exudation the drug enhanced absorption of the abnormal products.

Martin and Lublinski have produced cures with iodol, internally administered, in chronic pulmonary affections, and in laryngeal tuberculosis. The latter author has seen satisfactory results follow the use of iodol in ozæna, especially before complete atrophy of the mucous membrane and adjacent tissues has been established. In diseases of the nose and larynx great benefit has been obtained by Seifert. This observer has used the drug with success in atrophic rhinitis and in syphilitic ulcerations of the nasal pharyngeal cavities.

The statistics published by Szadeck are similarly interesting. He has employed suc-

cessfully, as a local application, iodol in 20 cases of soft chancres, 10 of gummous ulcerations, and in 7 of suppurating buboes. Internally he used the medicament in 17 cases of tertiary syphilis: 4 of gummous ulcerations and tumors of the skin and subcutaneous tissue; 9 of gummata of the pharynx; 2 of syphilitic ozæna with lesions of the bones and cartilages of the nose, and 2 of syphilitic hemiplegia. All these cases were benefited, and no untoward effects were experienced by the patients. Assaky has seen beneficial results from the use of the drug not only as a disinfectant and alterative, but also as an antiseptic in cases especially of infectious disorders such as erysipelas.

In ocular practice, iodol has been largely employed by Arago, has been especially studied by Juquer who found it of the greatest service in the following eye diseases: ulcerations of the conjunctiva; conjunctivitis accompanied with diphtheritic or purulent infiltration; primary or secondary ulcerations of the cornea; chronic affections of the lachrymal duct and suppurating dacryocystitis. Similarly good results have been obtained by Talenti, Hoffman, and Glassner in the treatment of catarrhal conjunctivitis and other eye disorders.

The same be said, according to the reports published by Shetler and Purjesz, regarding the therapeutic action of the drug in oral practice, especially in otorrhœas accompanied with caries of the osseous parts.

Stembo has found iodol valuable in the local treatment of diphtheria. Cerna and Valdes have employed it internally with success in the treatment of diabetes mellitus.

We could cite further evidence to show the great advantages obtained from the use of iodol in the treatment of disease, and of its evident advantages over iodine. We hope, however, that we have sufficiently impressed our readers with the great therapeutic value of this substance, and that the properties of the drug, carefully studied by the observers cited, may be taken advantage of by the general practitioner. This comparatively new remedy certainly deserves serious consideration and further trial.

We will conclude, then, by stating that iodol may be used locally in the form of the powder itself, or as an ointment in vaseline 2 to 10 parts, and in lanoline in the strength of from 5 to 10 per cent. It may be employed similarly dissolved in alcohol of the strength of from 5 to 10 per cent., or dissolved in ether of a strength from 10 to 20 per cent. Internally, it may be administered in daily doses of from 1 to 3 grammes, for adults; in children, from 1 to 3 decigrammes a day.

BOOK REVIEWS.

SLEEP, INSOMNIA, AND HYPNOTICS. By E. P. Hurd, M.D., Member of the Massachusetts Medical Society, etc., Detroit: George S. Davis, 1891. The Physician's Leisure Hour Series, Price, paper, 25 cents; cloth, 50 cents.

This number of the series was long announced to be a translation of the monograph by Germain Seé, published in the *Medicine Moderne*, but is really the product of the pen of Dr. Hurd.

In its preparation Dr. Hurd has made liberal use of the material he has published in various medical periodicals, and has given us a brochure that will fill a very acceptable place in many a physician's library. The first chapter treats of the physiology of sleep; the second of insomnia; and the third, and last, of hypnotics.

THE YEAR-BOOK OF TREATMENT FOR 1892. A Critical Review for Practitioners of Medicine and Surgery, 8vo., pp. 491. Cloth, $1.50, Philadelphia: Lea Brothers & Co., 1892.

In this edition of this standard synopsis of the year's progress in therapeutics the reader cannot fail to be satisfied with the work done by the twenty-one eminent practitioners who compiled it. With such an epitome from year to year, the physician can keep fairly abreast of the most important advances in therapeutics.

LECTURES ON TUMORS, FROM A CLINICAL STANDPOINT. By John B. Hamilton, M.D., LL.D., Professor of Surgery and Clinical Surgery, Rush Medical College, etc. For the use of students. Second edition. Detroit: Geo. S Davis, 1891, Price, paper, 25 cents; cloth, 50 cents.

It was but a few months ago that we had the pleasure of reviewing this little brochure, and of recommending it to those for whom it was written. The fact that a second edition is so soon called for is proof sufficient that Prof. Hamilton has supplied a want and very acceptably.

PERISCOPE.

THERAPEUTICS.

MENTHOL IN PRURIGINOUS AFFECTIONS OF THE SKIN.

Dr. W. Dubrenilk, of Bordeaux, uses menthol in all itching skin diseases with success. In urticaria, certain eczemas and in the itching following scabies after it has been cured it shows its greatest efficacy. In urticaria or pruritus without any lesion it may be employed as a ten per cent. solution in alcohol or oil. In eczema the alcoholic solutions may cause irritation, and as their action is more transient it is better to employ the solution in oil:

℞ Ol amygdalar dulc.....grams 100
Menthol..... " 6-10

Or a salve of the oxide of zinc and menthol, for example the following:

℞ Adipis, Vaselin } aa.....grams 25
Zinci oxydi... . ..... " 10
Menthol..... " 1-5

In case it is used upon the face, vulva, or excoriated surface, it will be necessary to lower the dose. It can, on the contrary, be elevated when the pruritis is excessive and more localized. Menthol has the advantages of being cheaper than cocaine and less odorous than peppermint essence.

ONANISM CURED BY HYPNOTIC SUGGESTION.

Dr. Bernheimer (*Revue de l'Hypnotisme*) relates an instance of cure of the habit of onanism, after the first *séance*, in a boy eight years of age, who had practised the vice for three years, and at the time hypnotic treatment was instituted admitted that he gave way to his desires as often as three or four times each night and two or three times a day. All other treatment, such as bromide of camphor, bromide of potassium, restraining apparatus, baths, special diet, intimidation, threats, etc., had failed. Suggestion during hypnotic sleep was repeated daily for a fortnight, the suggestion being that he would never again have an idea of touching himself either by day or during sleep at night, and that he would, henceforth, be strong enough to resist all temptation. From the first day there was marked general improvement, gain in weight, and entire freedom from the habit. Suggestion does not consist in an order not to do a thing, but in the confidence given to the child. It is the idea put into his brain that he would no longer succumb to the impulse.

THE ACTION OF THE CANTHARIDINATES.

Heryng describes (*Therap. Monatshefte*, November, 1891) the action of cantharidinate of potassium in twenty cases of combined pulmonary and laryngeal phthisis. There was pain after the injections, but this could generally be done away with by previously injecting a few drops of a 10 per cent. solution of cocaine. The injections were made with strict antiseptic precautions, at first between the shoulder blades, and repeated every other day. There was no inflammatory reaction or abscess at the site of puncture, but occasionally a small tender swelling appeared. Before each injection the urine was examined, and every week the body weight registered. Where there was no fever previously a rise 0.5° to 1° C. was noted in the temperature. In one case there was marked improvement in the voice, owing to the swelling allowing a more exact approximation of the cords. Expectoration was easier, but there was no diminution in the number of bacilli. The symptoms of urinary irritation, when present, were increased quantity of urine and a small quantity of albumen, with tenesmus and dysuria. They lasted a couple of days, and were relieved by opium. The details of four cases are given in full. Considerable improvement was noted in cases 1 and 3. In cases 2 and 4 the initial improvement was not maintained, one patient being lost sight of, and the other ultimately dying of his general condition. In the 16 remaining cases, 11 of which were very severe and 5 moderately so, the result was negative, the number of injections varying from three to fifteen. No positive result was obtained from any local application of the same solution to the larynx itself. Heryng agrees with other authors (1) that in early cases of laryngeal tuberculosis these injections bring about in some instances a swelling of the infiltrated parts, and a rapid cleaning of the floor of the ulcer; (2) that healing is thus favorably influenced; (3) that with 0.2 milligrammes no irritative effect is noted in the urinary system; (4) that the treatment is contra-indicated in severe cases of laryngeal tuberculosis, and also when the general condition is unfavorable, or irritative symptoms as regards the alimentary tract or kidneys are present; (5) that with doses of over 0.3 milligrammes these irritative symptoms appear; and (6) that a disadvantage of the treatment lies in a diffuse, rapidly-appearing local œdema, which increases the dysphagia. This œdema disappears of itself in a few days, but in case of out-patients it should be borne in mind.—*Brit. Med. Jour.*

ACID NITRATE OF MERCURY AS A CAUSTIC.

Hutchinson (*Archives of Surgery*, 1891) speaks highly of this remedy as an application in nearly all unhealthy sores, and wherever an infective process seems likely to involve the other parts. It is thus useful in boils, lupus, late syphilitic disease of skin or mucous membrane, and in phagedena. It should be cautiously applied with glass brushes of various sizes, any superfluity being taken up with thick blotting paper to avoid scar-formation.

TOXIC EFFECTS OF IMPURE CHLOROFORM.

As an experiment on animals conducted in the Pharmacological Laboratory of the University of Berlin, DuBois-Reymond (*Brit. Med. Jour.*, No 1622, p. 209) has shown that the toxic effects of chloroform are greatly increased by the presence of impurities. By the method of Pictet, of crystallizing chloroform by means of intense cold, it was possible to separate the pure drug from impurities. The latter occasioned greater frequency of pulse, greater depression of blood-pressure, and cessation of respiration more quickly than did the former.

INTRAVENOUS SALINE INFUSION.

Dr. Pye Smith recently reported the case of a man, who had suffered from profuse hæmorrhage after a severe gunshot wound of the leg. Amputation being necessary, but the patient unfit for it, a pint and a half of three-quarters per cent. saline solution was injected into his saphenous vein with marked improvement, and amputation just below the knee was performed. Circulation then failing again, another pint and a half was injected before he recovered from the ether, and at once his pulse and color were greatly improved, and in a few hours he had completely rallied, and subsequently made a good and rapid recovery.—*Medical Press.*

ANTISEPTIC PROPERTIES OF PEROXIDE OF HYDROGEN.

Dr. Paul Gibier (*Med. News*) says:

I believe that the practitioner will meet with very satisfactory results from the use of peroxide of hydrogen, for the following reasons:

1. This chemical seems to have no injurious effect upon animal cells.

2. It has a very energetic destructive action upon vegetable cells-microbes.

3. It has no toxic properties; five cubic centimetres injected beneath the skin of a guinea-pig do not produce any serious result, and it is also harmless when given by the mouth.

As an immediate conclusion resulting from my experiments, my opinion is that peroxide of hydrogen should be used in the treatment of diseases caused by germs, if the microbian element is directly accessible; and it is particularly useful in the treatment of infectious diseases of the mouth and throat.

OXYGEN AND STRYCHNINE IN RESPIRATORY TROUBLES.

Dr. Couper Cripps writes in the *British Medical Journal:* In view of the importance of the subject to which notice has been lately directed by Dr. Brunton and others, I would like to draw attention to an abstract of my M. D. thesis published in the *Liverpool Medico-Chirurgical Journal* for July, 1888. In this I advocated the use of oxygen for the respiratory trouble of coma in all cases, and, amongst others, related a case of opium poisoning which occurred in July, 1885, and which I treated successfully with the inhalation of oxygen, after artificial respiration had been previously maintained for over six hours without, apparently, any permanent benefit to the patient.

As regards the case of pneumonia related by Drs. Brunton and Prickett in the *British Medical Journal* for January 23d, in which venesection and the hypodermic injection of strychnine (apparently afterwards employed) failed to induce any marked effect, I may mention that in the case of opium poisoning referred to, dry cupping was resorted to over the chest and back, in order to relieve the extreme congestion of the head and neck, but it appeared to render the respiration more defective, and this was attributed to the withdrawal of blood from the circulation, diminishing its capacity for absorbing and carrying oxygen when presented to it in a dilute form.

It is thus possible that in Drs. Brunton and Prickett's case the venesection was the cause of the respiratory centre failing to respond to the hypodermic injection of strychnine, for in the following case of pneumonia a similar administration of this drug was followed by recovery:

M. B., a gentleman, aged about 42, had been going about suffering from symptoms resembling a mild attack of influenza for five days, and when first seen, on December 15th, 1890, presented signs of pneumonia,

limited to a small area outside the right nipple; this gradually extended until December 22d, when the entire upper lobe had become involved. The temperature, with slight remissions, had been about 104° F., and there had been almost constant delirium since the evening of December 15th, the mouth and the fauces were inflamed and thickly dotted over with an aphthous exudation, and on account of this and the dryness of the tongue swallowing was extremely difficult, and for the last three days nutrient enemata had been employed. The patient being thus in a critical condition, Dr, T. D. Acland kindly saw the case with me in the evening of December 22d, and gave a very gloomy prognosis. Dr. Sedgwick Saunders, who was attending from time to time in a friendly capacity, took a similar view of the case, although he was not able to be present at the consultation.

On December 24th I was called early to the patient, as it was supposed he was dying. On my arrival I found the friends firmly persuaded that the end was near at hand, one of the trained nurses having left with the impression that, such being the case, her services were no longer required. The condition of the patient was certainly alarming, for there had been several involuntary evacuations, enemata were no longer retained, there was retention of urine, and it seemed almost impossible to get him to swallow. He was quite unconscious, with teeth tightly clenched and face very dusky, constant twitching about the mouth, and convulsive movements of all the limbs. The respirations were slow and of a marked "Cheyne-Stokes" character, with long pauses at intervals, during which the patient became much cyanosed, and was on several occasions supposed, by his friends, to have breathed his last.

There being no time to obtain a supply of oxygen, which I have successfully used on other and somewhat similar occasions, I concluded the best thing to do was to stimulate, if possible, the respiratory centre, to the exhaustion of which the urgency of the symptoms appeared to be mainly due. I therefore obtained a solution of strychnine, and gave a hypodermic injection of one-fiftieth grain; a slight improvement soon took place in the breathing, and I was encouraged to repeat the injection after a short time, and at intervals of a few hours, until I had given the tenth of a grain; by this time the respiration had became quite regular, and consciousness had returned. The patient subsequently made a complete recovery.

I should mention that the case was complicated by a severe burn on the chest, caused by the application of a poultice on December 17th. This was an additional indication for the use of oxygen, could it have been obtained in time, for the gas has been shown to be of marked utility in cases of extensive burns.

DEATH FROM INJECTION OF COCAINE INTO THE TUNICA VAGINALIS TESTIS.

M. Berger (*Société de Chirurgie*, Paris, December 16, 1891) reports a case of death following an injection of cocaine into the tunica vaginalis testis for the cure of hydrocele by the injection of iodine. The patient was a young man who had a hydrocele which was very tense and as large as a turkey's egg.

As the hydrocele had developed very rapidly, M. Berger, fearing that it was a symptomatic hydrocele dependent upon some disease of the testicle, requested his interne to puncture it and examine the testicle; then, if it were found normal, to inject into the tunica vaginalis a tablespoonful of two per cent. solution of cocaine, cause it to remain a few minutes, then allow it to escape, and immediately afterwards inject the iodine, as had been done in a large number of cases without accident.

The operation was done exactly as directed. The interne injected a tablespoonful of a 1½-per cent. solution of cocaine into the tunica vaginalis, left it there hardly a minute, withdrew the whole quantity injected, and proceeded to inject the iodine. The patient was not conscious of any pain; he got up after the operation, and took his leave. In a little while he returned, complained of great weakness, and at once had convulsive movements of the face and limbs, clonic and tonic convulsions, tetanic contractions of the muscles, and finally became absolutely comatose, with abundant, bloody, frothy mucus exuding between his lips; his pulse rose to 130, and he died in cardiac syncope. Injections of ether and caffeine, artificial respiration, tracheotomy, etc., were tried, but without avail.

M. Richardière made an autopsy and found general congestion of the meninges and of the lungs, mitral insufficiency, and alcoholic lesions. The tunica vaginalis did not communicate with the peritoneal cavity. M. Richardière had made autopsies on eleven cases where death had been due to injections of cocaine.—*L'Union Médicale*, December 22, 1891, p. 898.

MEDICINE.

NEURASTHENIA AND ITS RELATIONS TO CHANGES OF THE GASTRO-ENTERIC TUBE.

Dr. Champagnac has published a monograph (Steinheil, Paris) upon this subject which is very extensive, and from a bibliographic and historic point of view this question is of real and unquestionable value. His conclusions are as follows:

1. The coincidence of dilatation of the stomach and prolapse of the right kidney and neurasthenic disturbances is absolutely incontestable.

2. One may, by directing one's treatment towards the dilated stomach, cure the nervous symptoms which accompany and follow it.

3. This treatment does not cause the dilatation to disappear, but prevents the auto-intoxication which is the cause of the neurasthenic symptoms.

4. Although the gastrectasia does not disappear entirely the patient ceases to be nervous.

5. In the pathogenesis of neurasthenic disturbances, we do not admit the theory of Glénard—enteroptosis—but that of Bouchard—the pathogenic importance of dilatation of the stomach.

6. We hold the nervous theory—Beard's—as insufficient and incapable of explaining the neurasthenic phenomena, even if they have preceded the dyspeptic symptoms.—*Gazetta degli Ospitali*, No. 25, 1891.

POST PALUDAL PNEUMONIA.

Hadji-Costa (*Rev. de Méd.*, November 10th, 1891) relates fourteen cases of post-paludal pneumonia. In Thessaly malaria prevails widely and at times so severely as to merit the name of an epidemic. Such epidemics occurred in 1884 and 1885. In the two following years there was no such occurrence but numerous cases of pneumonia were observed. A relation between malaria and pneumonia undoubtly exists. Three forms have been described: (1) The intermittent pneumonic fever of some authors in which each access of fever is said to be attended by some of the classical symptoms of pneumonia—this resembles the cases of intermittent pneumonia of non-malarial origin which have been recorded by some writers; (2) cases in which the malarial attacks occur regularly in the course of an ordinary pneumonia; and (3) cases which occur in those suffering from confirmed malarial intoxication, hence the name post-paludal pneumonia. Its onset is insidious, there is no shivering, hardly any pain in the side, and not much cough. Abdominal symptoms are frequently present—nausea, vomiting, slight jaundice, and loose stools. The temperature is intermittent, and defervescence slow; nervous symptoms often predominate. In the absence of history and physical examination of the chest, it is impossible to distinguish it from enteric fever. The prognosis is grave. The question arises as to whether the development of the pneumococcus upon a soil altered by malaria will account for the peculiar characters of the pneumonia, or whether the micro-organisms of malaria do not rather themselves bring about an inflammation of the lung unlike ordinary pneumonia. The author inclines to the latter view, and he points to analogous facts occurring in the other infective diseases. The treatment should be directed to the malaria.

A NEW VARIETY OF INTERSTITIAL NEPHRITIS.

Dr. John Arschagouni, in an article in the *Internat. Jour. Surg.*, says: The *Bulletin de Thérapeutique* published in one of its recent numbers a *new variety of interstitial nephritis*, described by M. Letzerich, and due to a *special bacillus*, short and fine, of crescent shape found in the interstitial tissues of the kidneys, at the border of cortical and medullary substances. also in the urine of the patient.

Symptoms:—Begins by an ill-defined malaise with fever and some gastric symptoms; such as anorexia, coated tongue, vomiting, great thirst, urine scanty, of a dark color, with uric acid crystals and abundant urates. This state remains from four to ten days, and after several vomitings suddenly appears œdema of the face, including the eye-lids and cheeks, also œdema of the feet, hands, and of the lumbar region, which becomes painful to touch; also some ascites, hydrothorax and even hydropericard are found. The œdema and dropsies always comes on with more or less complete suppressed urine, containing always of albumen, although less than in Bright's disease. Few renal epithelium and red globules are found and unsually no casts, but, on the contrary, leucocytes and bacilli are found in great numbers.

The temperature usually does not go over more than 39.5, sometimes 40.3. In such conditions attacks of eclampsia easily could be produced in children. Often, these is somnolency, and even a comatose state. In every case there is a very intensely generalized bronchitis; alternate constipation and

more or less profuse diarrhœa. Death may close the scene by uremia towards the end of the second or beginning of the third week; but the amelioration mostly follows a free micturition, which is dark at first and gradually becomes clear. At times, especially in adults, this disease may become chronic and continue for three months. Although the differential diagnosis of this variety from other nephritis is not difficult, the microscope settles the question more surely by the presence of these special bacilli in the urine.

The prognosis is favorable. M. Letzerich, upon forty-five cases of his own observation, lost only six, others have been cured from three to six weeks in children and from three to nine weeks in adults.

M. Letzerich has been able to isolate and cultivate these characteristic bacilli and, furthermore, he has produced by inoculation in animals an interstitial nephritis. Generally, children from two to thirteen years old are most attacked, but young men from eighteen to twenty-three years old haven't escaped it. The disease mostly occurs in the hot season, probably from impure water containing these bacilli.

It would always be a wise plan in any case of early stage albuminuria, to verify if the urine freshly voided contains any such bacilli or not.

THE BACTERIUM COLI COMMUNE AND PERITONITIS FROM PERFORATION OF THE INTESTINE.

In six cases of perforation in typhoid, which occurred at Florence during the past winter, Dr. Ottone Barbacci (*Lo Sperimentale*, August 15th, 1891) made careful observations of the peritoneal exudation. The perforation was always in the lower portion of the ileum; four times it was single, and in the other two cases two ulcers had given way close to each other. In each case cultivations were make on gelatine and nutrient agar; guinea-pigs and white rats were also inoculated with the exudation material. In four cases plate cultures were also made from the intestinal contents taken from the base of the ulcers, and also from the heart blood. In all six cases only one species of microbe developed from the cultures, and the author identifies this as the bacterium coli commune. The results of the inoculations on animals showed in three cases also the presence of the diplococcus lanceolatus capsulatus of Fränkel, but it was noted that the virulence of this was very slight, disappearing rapidly on being passed through the second animal. Very few and feeble colonies could be obtained from the blood of these animals, and the author thinks that this microbe was only an accidental impurity. He regards the bacterium coli commune as the true cause of the perforation and peritonitis. He appears to have satisfied himself that it was this organism, and not the bacillus typhosus of Eberth, which was present in his cases, although, as he himself admits, the distinction between these two species is very difficult. Much evidence has lately been advanced to prove the close relations between these two bacilli; but however this may be, the results above described are of great interest, as also is another case mentioned in the same paper—in which the author withdrew by aspiration some pus from a case of suppurative perityphlitis, and obtained from it pure cultures of the same bacillus.—*Brit. Med. Jour.*

A CASE OF DISAPPEARANCE OF SUGAR FROM THE URINE.

Dr. C. G. Am Ende, makes the following note in the *N. Y. Med. Jour:* Mrs. K., aged forty-two, mother of six children, menstruation yet regular but scantier, weight one hundred and twenty-one pounds, of good muscular development, no obesity, face flushed, was for the first time informed that she had diabetes about three years ago by Dr. ——, to whom she applied for treatment of lacerated cervix with consequences, but refused operation.

In the summer of 1891 the patient came complaining of severe gastric and neuralgic disturbances. Upon examination of her urine on the occasion of her next call, Fehling's solution caused a precipitate immediately upon its addition to the yet cold urine. The specimen brought contained considerable albumen, and after a few days a copious sediment of triple phosphates, some uric acid, a quantity of pus cells and *Bacillus termo*, very few epithelial cells, the majority from the bladder, but on one slide two cohering quadrangular cells with nodules similar to the tubular; no casts. Micturition frequent, slightly painful; the right kidney swollen and painful to pressure. No urine drawn directly from the bladder. Besides intra-uterine, the treatment comprised galvanization, strict diet, bismuth, with pepsin and pancreatin, bromide of sodium, and atropine.

On October 4th no sugar could be detected; there was also a decrease of albumen. Doubting the Fehling's solution, which was over a year old, a fresh one was prepared during the week.

October 11th.—Uric acid; again no precipitate. Doubting the fresh Fehling's solu-

tion, the juice of a grape was added to the yet hot mixture of urine and Fehling's solution, with immediate discoloration, etc., following. Albumen reduced to faint cloudiness upon boiling with nitric acid.

18th.—Uric acid. No sugar, no albumen, kidney not painful but quite an increase in phosphates. Specific gravity had risen to 1.024 from 1.015 on October 11th. It remains to be seen whether this rise depends on a limited allowance of bread since October 11th, or a transient exaggeration of diffused neuralgias, noticed, by the way, on two other patients with hysteric affections on Saturday.

The patient reported improvement in sleep since the beginning of the month, also increasing capability for housework. Except for a small allowance of bread, rigid treatment is continuing.

THE BLOOD IN SCURVY.

In the *Centralbl. f. Bakteriologie,* September 26th, 1891, reference is made to the work of Wieriuzskii, who examined the blood of scorbutic patients for micro-organisms. Cover-glass preparations were made in the first place, and examined both in the fresh state and after staining; a large number of colors was employed. No organisms were found. Next, blood from the finger and from scorbutic patches was sown upon various nutrient media, all the common and many uncommon ones being used. In all, 111 inoculations were made. Micro-organisms developed in 13 tubes only, and proved to be merely the common ones present in air, such as sarcina staphylococci, and B. subtilis. All the remaining tubes, both those which had been kept at the ordinary temperature and those placed in in the incubator, were found to be sterile. Finally, four rabbits were inoculated, each with several drops of blood. All remained healthy. These experiments support the view that scurvy is not a disease caused by micro-organisms in the blood.—*Brit. Med. Jour.*

(414) THE NUMBER OF LEUCOCYTES IN THE BLOOD IN PNEUMONIA.

M. Tchistovitch (*Annales de l'Institut Pasteur,* July 25th, 1891) has made some interesting observations on the cellular elements of the blood in pneumonia. It has been noted by several observers that in cases of pneumonia ending in recovery the blood generally contains a greatly increased number of leucocytes, while in fatal cases the leucocytes are diminished far below the normal number. The following experiments were made, with the object of elucidating the relation between the virulence of the diplococcus pneumoniæ and changes in the number of leucocytes in the blood of animals inoculated with this microbe. Cultures were obtained by inoculating a rabbit with pneumonic sputum, and on its death inoculating tubes of bouillon with the heart blood, in which diplococci abound. These broth cultures are at first extremely virulent, but on being kept at 38° C. lose their virulence from day to day. Having thus obtained a series of cultures of different virulence, these were used to inoculate rabbits, of which the leucocytes had been carefully estimated for some days previously by means of the hæmocytometer. After inoculation the leucocytes were again counted at stated intervals until the recovery or death of the animal. The following results were obtained: 1. Attenuated cultures caused in every case an increase in the number of leucocytes, which lasted one or two days, and disappeared with the recovery of the animal. 2. With virulent cultures, after a few hours even, there was marked diminution of the leucocytes, which became more evident till death took place. (This fact had nothing to do with the enfeeblement of the circulation, since it is very early apparent, when the animal is still quite lively and has an energetic circulation.) 3. The course of the disease was dependent on the virulence of the culture and on the resistance of the animal. A culture strong enough to kill a young rabbit failed to cause the death of an older one, and produced diminished leucocytosis in the former, increased leucocytosis in the latter. Sometimes, however, the course was not quite regular, for an animal would occasionally become at first very ill with diminution in the number of its leucocytes, then these would increase and recovery take place. Although this result still requires some explanation, it would seem to be certain that a benign course is closely connected with increased phagocytosis, a fatal course being marked by absence of phagocytosis. Thus, examination of the blood in pneumonia may be important from the point of view of prognosis.—*Brit. Med. Jour.*

IRRITABLE BLADDER.

℞

Potassium citrate.....gr. iv.
Fluid ext. triticum repens,
Tinct. of hyoscyamus.....āā ʒ j.
Fluid ext. of buchu.....ʒ ss.
Water, sufficient to make.....ʒ iij.

M. Sig. One teaspoonful in wineglassful of water, three or four times daily.

—*Ex.*

SURGERY.

PRESENT ASPECT OF CEREBRAL SURGERY.

Dr. Landon Carter Gray in writing upon this subject in *The Alienist and Neurologist* for January, says that we do not yet know the cortical centre for temperature, pain, touch, and muscle sense. It is not always the case that the lesion is to be found on the opposite side to the paralysis; Sometimes it found on the same side. This is explained by the anatomical fact demonstrated by Flechsig, that in a small proportion of cases there is no decussation.

SPASMODIC WRY NECK.

Noble Smith F.R.C.S., Ed., in a recent publication endeavors to show that neither drugs, local applications, nor other general methods are of permanent use in the treatment of well-established wry neck. That electricity has failed to do permanent good, except in some recent cases. The nerve-stretching cannot with certainty be depended upon. That section and ablution of a piece of the spinal accessory nerve is certain to remove all spasm from the muscles supplied by that nerve, and is very likely to remove spasms set up in other muscles, although other nerves are apparently involved. That the most satisfactory plan of operation is section of the nerve upon the inner side of the sterno-mastoid before it enters the muscle. That when other muscles remain spasmodically affected, the spasms may be removed by section of the nerves supplying those muscles. That operations of section of the spinal accessory nerve, and of the posterior roots of the cervical nerves, are not followed by serious inconvenience from paralysis of the muscles. That there seems to be no risk of the reunion of the nerves, and return of the spasms after operation.

TREATMENT OF HYDROCELE.

According to the *Indian Medical Gazette*, no treatment succeeds better in ordinary cases of hydrocele than the injection of the tincture of iodine. It does, however, cause pain and may produce pyrexia, and iodism has resulted from absorption. Dr. Milliken has treated 54 cases by injection of strong carbolic acid: nine were not subsequently seen; four remained under observation, and 36 were cured; four required two injections, and five had to be injected three times. There was no sloughing, and no patient was more than a day away from business. Five to twenty-five minims of liquefied crystals of carbolic acid are injected through the cannula which evacuated the fluid. After removing the cannula the sac is lightly kneaded to distribute the acid over its inner surface.—*Bristol Medico-chirurgical Journal*, December, 1891.

GASTROSTOMY IN STRICTURE OF THE ESOPHAGUS.

At a meeting of the Glasgow Medico-Chirurgical Society, Knox (*Glasgow Medical Journal*, 1892, xxxvii, 1) presented a man forty-eight years of age, who for seven months had had progressively increasing difficulty in swallowing and loss of flesh. On examination, a stricture of the lower portion of the esophagus, impassable to a bougie, was found. As it was feared that the obstruction would ultimately become complete, gastrostomy was performed, the stomach first being sutured to the abominal parietes, and, after an interval of a week, incised. Not only was it an advantage to be able to successfully nourish the patient through the artificial opening, but it was found that as a result of functional rest swallowing became considerably easier.

ECHINCOCCUS OF THE LIVER OPERATED ON BY COSTOTOMY.

Th. B., a young Icelandic woman, æt. 20, entered the hospital with symptoms which apparently indicated a right-sided tuberculous pleuritis, namely, infiltration of the right apex, change in the voice, sweat, failure of the general nutrition and disturbances of digestion. Examination of the sputa was not then well in vogue in that hospital. As the patient began to have rigors and grow worse, a trial puncture was made without result. In December a great prominence of the right hypochondrium and epigastrium was noticed, while the anterior border of the liver was felt three inches above the umbilicus. Friction sounds were audible on the right side of the fossa infraspinata. December 13 a second trial puncture was made in the ninth right intercostal space and a small quantity of purulent fluid drawn off; this was examined under the microscope, but revealed nothing definite. As the diagnosis of empyæma was thought certain, the cystotomy was performed December 15, and a six centimetre piece removed from the tenth rib in the posterior axillary line. About 1,100 grains of fœtid pus were removed which contained large yellowish and gelatinous masses as well as the remainder of a number of torn membranes which presented a distinct stratification and were studded with prominences of

the size of a pea. No hooks could be found. The cavity could be felt below as a funnel-shaped hole piercing the smooth surface of the diaphragm. The patient bore the operation well. The purulent discharge diminished, but the wound could not be closed on account of the discharge of bile. The prominence of the right side decreased; several calcareous masses were removed. The patient's appetite and general condition improved, although she constantly lost quite a quantity of bile. The cavity decreased in size, the fistula contracted, the drainage-tube was removed; the patient increased in weight and had naturally colored stools. The fistula finally closed entirely, and the patient was discharged as cured February 23, 1887.

The writer cites two similar cases. Firstly, that of Krause (*Sammlung Klinscher Vorträge*, v. R. v. Volkmann, No. 325, 1888), where a yound man, æt. 27, presented an echinococcus cyst siturted upon the upper conxex surface of the liver necessitating, on account of the upward pushing of the diaphragm, the performance of costotomy and the opening of the cyst through the diaphragm. A drainage tube was inserted and the wound preserved free from irritation or infection, although a large amount of purulent fluid was discharged. Secondly, that of James Israel, (*Verhandl. d. d. Gesellschaft f. Chirurge*, viii, 1879, 1, p. 17), which was treated aftee Volkmann's method, costotomy, and as it could not be determined whether the diaphragm was adherent to the tumor the wound was tamponed with carbolized gauze for seven days, and finally an incision was made into the cyst through the diaphragm.—Dr. A. Brunniche in *Hospitals-Tideude*, No. 30, 1890.

CASE OF TRAUMATIC EPILEPSY TREATED BY TREPHINING.

Dr. Alexander Mills, writes: Four and one-half years ago patient was struck on the head with a large stone, from the effects of which he could not return to work for over a week. Six months later again received an injury to his head, being struck with a bottle which cut the scalp to a considerable extent. Was not rendered unconscious. One of the cicatrices is markedly depressed. On admission there was considerable twitching of the facial muscles, retracting the angles of the mouth as if the patient was trying to say "C" distinctly. Great difficulty in protruding tongue which was quickly drawn back. No paralysis of lingual muscles, but the spasmodic action of these caused some indistinctness in articulation. These symptoms came on about a year subsequent to his injury with the bottle. The muscles of the external ears and the occipito-frontalis contract from time to time. All his movements are exaggerated when he is watched and are suspended during sleep. Twitching movements occur at the metacarpo-phalangeal joints; there is occasional flexion or extension of the wrist joints, but never any movements of the elbow or shoulder; when standing, his toes twitch, those of the right foot especially; has dizziness and headache, which sometimes come on with vomiting; twitching of the eye-lids. Operation performed. A V-shaped incision was made over the depression on the left side, a little above and in front of the ear. On exposing the temporal muscle it was seen to be divided into two parts by a dense adherent cicatrix, which condition had simulated a depression of the skull. Trephine was applied with its centre over the cicatrix, and on removing the circle it was found to be normal, although somewhat thicker than usual. The dura mater was punctured with a small trocar and cannula and about an ounce of clear fluid drawn off. The dura did not bulge; it was thickened at one part. The vessels on its surface were then secured with double ligatures and divided, and a crucial incision was made into it. This exposed a bluish translucent cyst wall with a large vein coursing across it. There was a depression on the surface of the brain which measured about half an inch in every direction, but the brain tissue seemed healthy. The bone was not replaced. Wound dressed with iodoform gauze. After recovery from the effects of the chloroform jerking movements went on as before, affecting his tongue very much and making his articulation indistinct. Patient was difficult to manage. Remained in this condition for several days, being given chloralamid and hyoscine to keep him quiet. In a few days could speak a little better; spasms not so constant. Jerkings were much marked during sleep and also when greatly excited. About a month after the operation patient went home under the care of his brother. Was afterwards admitted to insane hospital, as he was somewhat dangerous and had threatened to kill his brother. He says this case is interesting in view of the fact that, although a distinct pathological lesion was found, and so far as could be, removed, no marked improvement took place in the condition of the patient. He says that it is possible that the pressure of the cyst had damaged the centres over which it was placed beyond the point from which they could recover.—*The Lancet*, Nov. 28, 1891.

OBSTETRICS.

INDUCTION OF PREMATURE LABOR BY GLYCERINE INJECTIONS.

Pelzer (*Centralbl. f. Gynäk.*, No. 2, 1892) gave a very satisfactory account of his experience of this method. He employs chemically pure, sterilized glycerine. A hundred cubic centimetres are thrown up between the membranes and the uterine wall. Full precautions are taken, not only against sepsis, but also against the entrance of air into the uterine cavity. In a short time regular pains set in. The membranes present well, and labor is usually easy. In two cases where labor was induced on account of contracted pelvis, the pains set in, in the first case, within half an hour, in the second after an hour. In a third case, the patient was at the end of the thirty-second week of pregnancy. For fourteen days she had been flooding; there was placenta prævia lateralis and a temperature of 104°. Glycerine was injected and pains set in an hour and a-half. Bleeding occurred two and a-half hours later. Turning was performed, and a dead child was delivered. The mother recovered. Glycerine injections are, in Pelzer's experience, valuable not only for the induction of premature labor, but also for accelerating delivery at term. In uterine atony it proves very efficacious.

RENEWAL OF MENSTRUATION AND SUBSEQUENT PREGNANCY AFTER REMOVAL OF BOTH OVARIES.

J. Anderson Robertson performed extirpation of both ovaries for cystic disease of these organs in a girl 23 years old. Three months after the operation she began again to menstruate. Five months after the operation she was married, became pregnant, and was delivered of a strong and perfectly healthy male child on October 25, 1890.

"From this very interesting case we may," says the author, "I think, learn several lessons. Amongst these are:

"(1) The truth of Mr. Lawson Tait's teaching regarding the starting point of menstruation—namely, that the ovaries are not causative of it. In fact, in this case, the presence of the diseased ovaries prevented it; normal menstruation was interrupted and the patient suffered from vicarious menstruation, as nose-bleeding, hæmoptysis, etc., and when they were removed normal menstrution followed.

"(2) The possibility of vicarious menstruation. The woman had brought up blood daily for months, but this ceased after the removal of the ovaries—that is, when normal menstruation became possible—and it has not recurred.

"(3) The proof that removal of both ovaries does not necessarily render a woman impotent. (An interesting medico-legal discussion might be raised on this point.) I was not aware of leaving any ovarian tissue. Indeed, my aim was to extirpate the ovaries thoroughly, and I thought I had done so. I suspect, however, that a small portion of healthy ovarian tissue had reached up to or beyond the hilus of the right ovary, and that this may have taken on regular ovarian functions. This, of course, is merely conjecture.

"(4) That in performing double oöphorectomy, except in cases of uterine fibroid, any apparently healthy portion may, perhaps, be left. I shall, at all events, keep this in mind in future operations."

NITRIC ACID AND CRIMINAL ABORTION.

Bellin, of Charkofi (*Nouvelles Arch. d'Obstêt. et de Gynéc.*, October, 1891, Supplement, p. 456), read before a medical society in that city a remarkable paper on eight cases of nitric acid drinking to produce abortion. The subjects took at first from fifteen to twenty drops of the acid several times a day, gradually increasing the dose. Severe symptoms appeared at the end of a month or six weeks. Abdominal pains, nausea, vomiting, constipation and subnormal temperature were observed, with remarkable mental symptoms. The patients also grew thin. In the first case abortion took place at the third month, and the patient was cured. In the second, abortion occurred at the same stage; the patient suffered miserably from abdominal pains afterwards, and ultimately killed herself. The third patient became insane. The fourth aborted at the fourth month and recovered. The fifth did not abort and recovered. The sixth committed suicide by swallowing matches, owing to the intense pain from which she suffered. Abortion occurred on the day before death. The seventh patient took the acid for two months without abortion occurring; she was syphilitic. The eighth, also subject to syphilis, took nitric acid for five weeks during the second and third months of pregnancy. She was delivered of a macerated fœtus on the sixth month and became insane. In all these cases where abortion occurred, it happened when the poisonous effects of the acid were most marked, or later after they had been counteracted. Bellin believes that the pathological changes caused by nitric acid depend upon the influence of that acid on the composition of the blood.—*Brit. Med. Jour.*

GYNÆCOLOGY.

MENTHOL IN PRURITIS VULVÆ.

Dr. Saalfeld, of Berlin, has found menthol, in a three to six per cent. alcoholic solution, to be more efficacious in this affection than either carbolic or salicylic acid solutions. He also obtained good results from a menthol-lanolin salve.—*Verhandlungen d. Dermatol, Vereinig, zu Berlin*, 1891.

OVULATION WITHOUT MENSTRUATION: PREGNANCY.

Loviot (*Arch. de Tocol. et de Gynéc.*, January, 1892) related, at a recent meeting of the Paris Obstetrical and Gynæcological Society, the case of a woman who had not seen a monthly period for fourteen months. Rheumatic pains set in and the abdomen became swollen. He discovered pregnancy between the sixth and seventh month. The mother did not believe in this diagnosis; nevertheless she was afterwards delivered of a very small child.—*Brit. Med. Jour.*

PRIMARY FIBROSARCOMA OF THE NASAL FOSSÆ.

Cisneros, of Madrid, (*Arch. Int. de Rinologia*, etc., February, 1892) records the case of a man, aged 46, who had suffered for about a year from gradually increasing obstruction of the left nasal passage, with profuse mucopurulent discharge and frequent hæmorrhage. On examination, the left fossa was found completely filled by a greyish mass with granular surface, painful, friable, and bleeding at the slightest touch. Posterior rhinoscopy showed vegetations of the growth projecting through the left choana. Examination with a probe showed that the tumor had a pedicle and that it sprang from the cartilaginous part of the septum. The mass was removed with the galvano-caustic loop, but immediately showed signs of recurrence. Vigorous use of forceps and cautery being insufficient to check the process, an incision was carried round the left ala, and, free access being thus obtained to the nasal fossa, tumor was removed as thoroughly as possible, the site of implantation being scraped with Volkmann's spoons and all suspicious points touched with the galvano-cautery; the fossa having been washed out and stuffed with iodoform gauze, the ala was replaced in position and sutured, the patient leaving the hospital on the seventh day. A fortnight later the growth had again recurred, this time perforating the septum and appearing in the right fossa. Forceps and cautery having again failed to stay the progress of the disease, both posterior nares were tamponed and the whole growth cleared out under chloroform with forceps and sharp spoons, nearly the whole of the cartilaginous septum being removed in the process. When seen a year later there was no sign of recurrence. The growth was examined by Dr. Mendoza, chief of the laboratory of the Hospital San Juan de Dios and pronounced to be a fibrosarcoma.—*Brit. Med. Jour.*

SCARIFICATION OF THE OS UTERI IN CHLOROSIS.

Dr. J. Cheron recommends scarification of the os uteri in chlorosis, and points out that this treatment has been highly spoken of by Schubert and other. The amount of blood to be drawn is about one gramme to every kilogramme of body weight. According to the above observers these slight bleedings greatly increase the number of red corpuscles and the amount of hæmoglobin in the blood. Dr. Cheron, in making use of scarification of the os in the treatment of old-standing disease in chlorotic patients, found that the general health as well as the local conditions improved. In many cases an analysis of the blood during and after treatment showed continuous improvement after each scarification. In chlorotic patients congestion of the womb is habitual, and it is easy to obtain forty to sixty grammes of blood at one operation. This local treatment seems likely to be of great benefit to chlorotic women, and it is easy to understand that it would be performed much more readily than venesection. The scarification, if done with antiseptic precautions, is not accompanied by risk.—*Lancet.*

A SENSITIVE TEST FOR ALBUMEN IN URINE.

The reagent is made by dissolving 8.0 mercuric chloride, 4.0 tartaric acid, 20.0 sugar n 200.0 water; the acid is added to produce a strongly acid solution and the sugar to increase its density. In applying the test the urine is acidulated with a few drops of strong acetic acid, filtered and delivered by means of a pipette into a tube half-filled with the reagent so as to form two layers. If the urine contains even less albumen than 1 in 50,000, there is produced immediately or before the lapse of a minute, a distinct white ring at the line of contact; the white ring is especially seen if the tube is held against a black background.—Dr. E. Spiegler, *Oesterr. Ztschr. f. Pharm.*, 1892, 65.

PÆDIATRICS.

PROPHYLAXIS OF SCARLATINOUS NEPHRITIS.

Dr. Ziegler (*La Semaine Médicale*, No. 4, 1892) puts his scarlatina patients upon a milk diet from the very first, and in over a hundred cases he has not seen a renal complication. During the first few days, when the anorexia is complete, the child is given a little milk, diluted with mineral water, when the appetite returns the child is given from a pint to three quarts of milk a day for the first three weeks, the milk is first boiled before administering. Now and then the child may be permitted to eat a piece of bread or a biscuit. This is continued in all its strictness for the first three weeks of the disease, to return gradually to the ordinary food.

EPIDEMIC OF CONTAGIOUS PORRIGO IN INFANTS.

Jonathan Hutchinson gives an interesting account of an epidemic of contagious porrigo (impetigo contagiosa) occurring in infants born in the maternity ward of St. Pancreas Workhouse, England. The starting of the epidemic seems to have been due to vaccination, but afterward no connection could be traced with the vaccine virus. The eruption was bullous, non-symmetrical, easily curable, of a local character, and with but little constitutional disturbance. It was decided that the wards should be closed for a month, and every possible means of disinfection should be employed. This was done; but on again opening the wards, after several children had been born and discharged healthy, the eruption again broke out. Several of the mothers contracted the disease, and it appeared on them as an impetiginoid eczema.—*Archives of Surgery*, January, 1892,

EXALGIN IN CHOREA.

Lowenthal (*Berl. Klin. Wochenschr.*, 1892, No. 5, p. 95), reports the results of the employment of exalgin in the treatment of thirty-five cases of chorea. Three grains were given three times daily; in a few cases the dose was given five times daily; in one case a grain and a half were given daily. The patients ranged from three to eighteen years of age. These cases presented all degrees of severity. The results were, on the whole, satisfactory; recovery was speedy in mild cases, retarded in severe cases. The duration of treatment was from a week to eight months. The results were the better the earlier in the disease the cases were seen. Unpleasant symptoms, such as tinnitus aurium, a sense of intoxication, disturbances of vision, vertigo, nausea, vomiting, jaundice, increased pain, headache, and cyanosis were observed in some cases in which the largest doses were employed; but these manifestations ceased upon the withdrawal of the remedy. It seemed as though a certain degree of tolerance of the remedy developed.

THE TEMPERATURE IN ACUTE PRIMARY PNEUMONIA IN CHILDREN.

As the result of a study of this subject, Holt, (*Archives of Pœdiatrics* 1891, No. 12) makes the following summary:

1. The predominating type of temperature in acute primary broncho-pneumonia is high and remittent, the daily fluctuations amounting usually to from three to five degrees Fahr. The sustained high temperature is uncommon except in the rapidly fatal cases. A low range of temperature—only two or three degrees above the normal—is not very uncommon, but is more frequent in fatal cases.
2. The termination of the fever is almost invariably by lysis.
3. The lowest mortality is among cases in which the fever lasts from eight to fourteen days; the highest is among those lasting but two or three days; the next to these the protracted cases, lasting over four weeks.
4. The day of highest temperature in fatal cases is usually the last day; in recovery cases there is no rule in this respect.
5. The lowest mortality is seen in the cases in which the highest point reached was between 103° and 104.5° F. Above 105° the mortality rises with the increase of each degree in the temperature. Abnormally low temperature are also to be dreaded, since they usually indicate a constitutional condition which makes recovery very doubtful.

TWO CASES OF HYSTERIA IN CHILDREN.

Dr. A. Selmer, of Balsfjorden, Norway, records two cases of hysteria in children which came under his observation. The first case was that of a 13-year-old girl of phthisical antecedents, who had overworked herself at school. She presented the characteristic picture, with maniacal attacks at times. She eventually recovered under electrotherapeutic treatment. In the second case, a girl of 10, the disease began under the guise of a febrile state resembling typhoid fever, together with a peculiar apathetic condition.

This continued for four weeks. She would then lie in an apathetic state with eyes closed, refuse to answer, and reject nourishment. By careful watching, it was found that she arose of nights and ate plentifully. This was kept up for seven months.—(*Norsk. Magazin for Lægevidenskaben*, No. 6, 1891.)

HYGIENE.

AN IMMUNITY-CONFERRING PRINCIPLE IN THE BLOOD OF ANIMALS TREATED WITH TUBERCULIN.

Having observed some degree of immunity in tuberculous guinea-pigs treated with tuberculin, Tizzoni and Centanni (*Centralbl. f. Bakteriol. u. Parasitenk.*, xi, 3 u. 4, p. 82) preceded injections of suspensions of tubercle-bacilli into the jugular vein by the introduction of the serum of the blood of such animals into the peritoneal cavity. Of ten animals thus treated, five died. All presented local lesions at the site of inoculation. In the fatal cases death was deferred and the visceral lesions were less extensive than usual. The view is expressed that tuberculin is, or the soluble products of the tubercle-bacillus are, capable of conferring a certain degree of immunity dependent upon the presence of an active agent in the blood, and that the good effects of tuberculin do not result from a direct action, but are dependent upon the generation in the body of some protective principle, which it is hoped future investigations will succeed in isolating.—*News.*

ANCIENT HINDU VACCINATION.

At a meeting of the Epidemiological Society (*Lancet*, February, 29, 1892), Dr. Pringle quoted a remarkable passage from an ancient Hindu work, which showed that true vaccination was known and practised in India centuries before the birth of Jenner: "The small-pox produced *from the udder of the cow* will be of the same mild nature as the original disease. . . . the pock should be of a good color, filed with a *clear* liquid, and surrounded by a circle of red. . . . There will be only slight fever of one, two or three days, but no fear need be entertained of small-pox so long as life endures." Pasteur's attenuation of virus by successive cultures has been applied in India for hundreds of years to inoculations with variolous lymph, which the document in question directed to be taken from "the most favorable cases," and he has seen series of such selected inoculations in which there was no general eruption, and the local phenomena were scarcely distinguishable from those of vaccination

INFANT MORTALITY IN FRANCE.

At a recent meeting of the Society for the Protection of Children in France Dr. Rochard (Chairman) stated that France loses every year 250,000 infants, and that out of this number there are at least 100,000 whose lives could be saved with intelligent care. These lives were the more precious in the present period, for France could no longer afford to lose them. When he stated, in 1884, that the population of France would stop increasing towards the beginning of the 20th century, he was pooh-poohed. His prophecy has been justified sooner than he wished. The number of deaths in 1890 outnumbered the births by 38,446. It was not easy, said Dr. Rochard, to add to the births, but it was possible to diminish the death-rate among infants. The 100,000 babes that ought to be saved every year would repopulate France. He then distributed medals and prizes awarded by the Society to doctors and nurses who had given their services to the Society.

PREMATURE BALDNESS AND ITS CAUSES.

Dr. Tyson's recent contribution to our pages on premature baldness, its causes and prevention, expresses the views that there is an increasing prevalence of premature baldness in men as compared with women, and that the cause is that men habitually wear heavier and more complete covering than women. We are not aware of any facts being adduced beyond Dr. Tyson's own impressions that premature baldness is more prevalent than formerly, and even if it were so we should still dispute his argument that the cause lies in the different character of the headgear of men and women. The difference, such as it is, lies deeper—viz., in the natural differences in the constitution of men and women as regards hair growth, and one element among these probably is the greater thickness and superior vascularity of the scalp in women as compared with men. Certainly the positions in which baldness first develops—viz., the upper part of the occiput, the vertex, and the temples—are all situations where the scalp is thinner than elsewhere; the sides of the scalp, for instance, which rarely become denuded of hair in what may be termed normal baldness. Indeed, the bald man seeks here the means to conceal his loss somewhat, and, by parting his hair immediately over his ear, and training what can thus be separated over the vertex, hopes that what he regards

as his defect may escape notice. Here we may remark that women lose their hair more frequently than is generally supposed, but are, from the arrangement and length of their coiffure, more successful than men in concealing it, and, if necessary, replacing the deficiency, while any such substitution by a man is like a town-crier proclaiming his loss to all beholders. Again, if the constant and more complete covering of the head were really the cause of baldness, it ought to be much more prevalent among the working classes, a large proportion of whom wear their hats or caps from morning till night; but few would venture to say that a larger proportion of them were bald than of those whose occupation employed the head more than the hands. Dr. Tyson's remarks on the general management of the hair seem to us sensible and sound as far as they go, but the addition of some form of antiseptic to the grease he recommends for occasional use would help materially in warding off that most frequent cause of baldness—seborrhœa capitis. When, however, the baldness exists as an hereditary failing, our efforts have to be confined to palliative treatment, directed towards delaying the process.—*Lancet.*

MEDICAL CHEMISTRY.

THYMACETINE.

At a meeting of the Berlin Gessellschaft für Psychiatrie und Nervenheilkunke on December 14th, 1891, Jolly gave an account of his experience with thymacetine, a substance prepared by Hoffmann, of Leipzig, which bears the same relation to thymol that phenacetine bears to phenol. Its chemical formula is as follows:

$$C_6H_2CH_3C_3H_7 \begin{cases} OC_2H_5 \\ NH(C_2H_3O). \end{cases}$$

It is a white crystalline powder, slightly soluble in water. Little is at present known about it from the pharmacological point of view beyond the fact that in two-gramme doses it does not cause toxic symptoms in dogs. Jolly was unable to test its antipyretic action, owing to the small quantity of the substance at his disposal. He found, however, that it had some effect as an analgesic. In seven cases of true migraine, thymacetine did no good, although the dose was progressively increased from 25 centigrammes to 1 gramme; but in other forms of headache it gave just as much relief as phenacetine. It has also some efficacy as a hypnotic. It was given in 26 cases of paralysis, delirium, etc., with insomnia, and in 16 it induced quiet sleep; in the remaining 10 the effect was *nil*. In patients who were in the habit of taking chloral, thymacetine appeared to produce just the same effect as that drug. The average dose required to induce sleep was 50 centigrammes. Among the secondary effects noted was acceleration of the pulse, the patients at the same time complaining of fullness, beating and noises in the head. Jolly thinks further trial is needed to prove the therapeutic value of thymacetine.—*Brt. Med. Jour.*

SALICYLIC ACID REACTION.

According to Schneegans and Gerock, the violet color resulting from the mixture of 10 cc. of a 0.2 per cent. solution of salicylic aldehyde with 2 cc. of a very dilute solution of perchloride of iron may be removed by shaking with 5 cc. of chloroform or ether. But if only 0.002 gm. of salicylic acid be added, the violet color remains persistent. A similar reaction occurs with the methyl ether of salicylic acid, and it may be used to detect as little as 1 part in 500 of free acid in artificial oil of wintergreen.—*J. Pharm. Els.-Loth.* and *Ph. Journ.*

MICROBES OF THE DEAD SEA.

For a long time there was doubt as to whether any organism, animal or vegetable, lived in the Dead Sea. Now the question is solved by a patient Frenchman, Dr. Lortet, who finds at last, in water from the Dead Sea, specific microbes of gangrene and tetanus. Inoculated rabbits promptly expire, which proves that the classic Lacus Asphalites is more alive than was formerly supposed.—*Ex.*

NITROUS ETHER AND ASTRINGENT DRUGS.

The probable cause of the evolution of gas in mixtures containing spirit of nitrous ether and fluid extract of uva ursi has been a fruitful theme in pharmaceutical literature these many years, and while the tannin of the uva ursi was by general consent asserted to be the exciting agent, no definite experiments were ever instituted to settle the question. The first step in this direction, so far as the writer is aware, has been taken by Mr. Leon C. Fink, who (*Notes on New Rem.*) experimented not alone with the effect of spirit of nitrous ether on various drugs containing an astringent principle as well as such in which no tannin is present, but he also employed tannin and gallic acid themselves. These experiments, some forty in number, have conclusively shown that tannin in contact with

nitrous ether is decomposed with the simultaneous disengagement of nitrous fumes, and this irrespective of whether the nitrous ether employed has an acid or neutral reaction. The nature of the reaction was not inquired into.

URINE TOXICITY IN THE INSANE.

Drs. Mairet and Bosc (*Jour. des Societes Scient.*, Nov. 11, 1891) state that in quiet mania urinary toxicity is the same as in the sane. In agitated mania the degree of toxicity is greater. In stuporous insanity the toxicity is less than in normal urine. In melancholia with stupor the urine was much more toxic and had toxic peculiarities. In melancholia the toxicity was increased in proportion as the anxiety increased. The urine had the same toxic qualities so far as regards myosis, micturition, the alimentary canal, and the circulation, but differed in the following particulars: Variations in temperature were produced. Hypothermy was first produced followed by hyperthermy, which was followed by a fall in temperature; sensibility abolition; diminution of reflexes; psychomotor disturbances, abulia, inquietude depression, anxiety, and auditory hyperæsthesia. In persecutory delusional cases toxicity is slightly greater than in normal urine. In senile insanity toxicity is less than in the urine of sanity. The urines of the insane may be grouped into two classes. (1) Those whose toxicity is not greater than the normal (senile insanity, calm period of certain psychoses). (2) Those whose toxicity is greater than normal. These last may be divided into two sub-groups: (A) Those in which the toxicity is more or less due to agitation or depression of the psychosis. (B) Those in which urinary toxicity persists independently of agitation or depression (melancholia with stupor, and certain manias). The toxic qualities of the urine of the insane are similar to those of normal urine so far as the alimentary canal, respiration, circulation, micturition, temperature, and even the nervous system are concerned. They may, however, so far as the nervous system is concerned, be divided into two groups. (1) Those in which symptoms due to normal urine are exaggerated. (2) Those in which symptoms are not produced by normal urine result. The first group includes certain cases of mania, and stuporous insanity. The second, certain cases of mania, melancholia with stupor, and melancholia. In cases where pathological urine merely reproduces the toxic tableau of normal urine, the degree of toxicity is due to an intensity more or less considerable of the disease, to agitation in mania, and depression in stupor when pathological urine gives rise to new toxic symptoms. These are due to the disorder itself. From this it results that by the side of psychoses produced by neurotic causes must be placed psychoses produced by disordered nutrition.

NEWS AND MISCELLANY.

Doctor—I believe you have some sort of poison in your system.

Patient—Shouldn't wonder. What was that stuff you gave me?—*New York Weekly.*

A California physician, not strictly ethical, advertises to pay half the funeral expenses in all cases where he is not successful. Probably he practices the "kill or cure" system.

MISSISSIPPI VALLEY MEDICAL ASSSCIATION.

Members of the Mississippi Valley Medical Association wishing to go to the American Medical Association at Detroit as delegates, will please send their names to

Dr. E. S. McKee, Sec.,
57 W. 7th St.,
Cincinnati.

A RIGOROUS EXPERIMENT.

Interesting and perhaps important in point of utility, an experiment lately carried out in the Russian army must come dangerously near to censure if tried in the light of humanitarian principles. In order to ascertain whether tents would suffice to shelter troops in the field during severe winter weather, eight soldiers chosen at random were, it is stated, made to pass the night, or as much of it as they could endure, under such conditions. Every care seems to have been taken to provide these men with warm and heavy clothing, and the snow within the tent was beaten down and covered with mats and straw. The men slept comfortably from nine in the evening until nearly four next morning, at which hour the thermometer showed that the temperature, originally registered as 31° F., had fallen to 4° below zero, within as well as outside the tent. Nature could them endure no more; sleep was impossible, and the soldiers only saved themselves from freezing by taking exercise in the open air. Everyone can understand the bearing of such observations on practical warfare, and we would not lightly disparage their useful intention. Nevertheless, it is

something new to find the human species thus subjected to such an *experimentum in corpore vili*, and we sincerely hope that military necessity will not—as we believe it should not—call for its repetition. The recorded experience of Arctic voyagers—who have often camped out in tents—may surely now suffice for evidence as to the amount and quality of clothing and of tent appliances required to withstand the extremes of winter cold.—*Lancet.*

PHILADELPHIA POLYCLINIC HOSPITAL.

An examination for the position of two Internes and two Externes in the Hospital of the Philadelphia Polyclinic, will be held May 3, 1892. The Committee will meet and examine the candidates on the date named above, at 8 P. M., in the hospital building, Lombard Street west of Eighteenth.

A number of clinical assistants will be appointed. Those desiring to apply should present their claims to the Committee.

G. E. DE SCHWEINITZ, M. D.,
H. AUGUST WILSON, M. D.,
S. SOLIS-COHEN, M. D.,
T. S. K. MORTON, M. D.,
Harris A. SLOCUM, M. D.

REMOVAL OF OVARIES FOR MOLLITIES OSSIUM IN NON-PUERPERAL WOMEN.

W. Thorn (*Centralb. Gynak.*, October 10, 1891) has observed two cases of mollities ossium. The first was in an early stage of the disease. She was still under treatment with iron, arsenic, and phosphorus, but without effect. In the second case the ovaries were removed. The patient was 32 years old, and had married in 1885. She bore three children, the last being born eleven months before the operation. After the birth of the second child the characteristic symptoms of mollities appeared, and increased during the third pregnancy, where labor was lingering and delivery completed by forceps. The disease afterward made rapid progress and caused great distress; the patient could not sleep owing to severe pain in the bones; the sternum was very tender to touch, and pulmonary symptoms set in. The case was much complicated by perimetritis. On November 9, 1891, the appendages were removed. The operation proved difficult for two reasons; the uterus was retroflexed and adherent; the pelvic cavity had become very narrow so that the necessary manipulations were difficult; the separated adhesions bled freely. The second complication was remarkable. The connective tissue of the pelvis was extremely œdematous, as seen normally in the puerperium alone; hence ligatures applied to the bleeding vessels on the uterine adhesions gave way, and the left tube was completely cut through when its ligature was being pulled tight. Thorn directs attention to this condition of the pelvic connective tissue, and asks if it be characteristic of mollities. After the operation, the pains in the bones rapidly disappeared, the sternum ceased to be tender to touch by the third day. On the fifth day uterine hæmorrhage took place, the temperature rose over 102° F., but soon fell to normal; the bronchial catarrh ceased, and the patient's general health became excellent. A show of blood occurred two months after the operation. The patient was then able to walk, though she waddled on account of the great changes in the pelvis and lower extremities. The disease was clearly arrested. Thorn is of Fehling's opinion, that mollities is an endemic reflex trophoneurosis of the bones, dependent upon the function of the ovaries, and that the removal of the ovaries is indicated as a cure for that disease.—*Brit. Med. Jour.*

TEST OF HYDROGEN PEROXIDE.

When a drop of a 10-per-cent. solution of metaphenylene-diamine chloride is boiled with a few drops of water and a drop of hydrogen peroxide solution, a carmine-red coloration is produced. This reaction will detect 0.005 mgm. of hydrogen peroxide in a drop of water, but is affected by the presence of nitrites. The test is thus modified, to be independent of the presence of the latter compounds: One or two drops of metaphenylene-diamine chloride are added to 1 cc. of ammonia solution containing a few drops of hydrogen peroxide solution. The mixture is boiled for some minutes, when the previously colorless solution becomes blue, of intensity corresponding with the peroxide present. Addition of alkali hydroxide solution changes the color to red.—G. Denigès in *Bull. Soc. Chem.* and *Jour. Chem. Soc.*

SEAT WORMS.

℞

Tincturæ rhei,	gtt. xxx.
Magnesiæ carbonat ...	gr. ¡ij.
Tincturæ zingiberis	gtt j.
Aqua, q. s.	ad ʒ iv.

M. Sig. Warm and use as injection three times daily.

—*Memphis Med. Monthly.*

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THE
MEDICAL AND SURGICAL REPORTER.

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CLINICAL LECTURES.

THE OPERATIVE TREATMENT OF EXTRA-UTERINE PREGNANCY IN THE LATER MONTHS OF GESTATION.*

By PROFESSOR R. FROMMEL,
ERLANGEN, GERMANY.

Gentlemen: Our knowledge and experience in the domain of extra-uterine pregnancy has wonderfully increased during the past few years, so much so that the report of additional cases would almost seem superfluous. Nevertheless, there are many things in connection with this subject that need further elucidation, and it is therefore desirable for us to profit by the complete histories of carefully watched cases. Last summer, in this Erlangen Clinic, we had two duplicate cases occurring within a week of each other: two cases of extra-uterine gestation, both of which led to operative interference. The histories of these cases are as follows:

Case 1. Mrs. E., a peasant's wife, 36 years old, came from a healthy family, and had menstruated regularly since her seventeenth year without any difficulties. She menstruated last during the end of May and first of June, 1890. The patient had previously given birth to three children, and apart from one attack of inflammation of the bowels, had never been ill. Since the cessation of her menses in May the woman considered herself pregnant. The course of pregnancy seemed to be entirely normal and not in any way different from her previous pregnancy. This went on until March 21, 1891, when she was taken with mild labor pains similar to those previously experienced. These continued for about five hours, and then gradually became stronger, especially in the ileo-cœcal region; the abdomen also became tender. This painfulness and tenderness continued for several days, the general condition of the patient, meanwhile, becoming seriously impaired. The patient became very weak and ill, and it was several weeks before she could leave her bed. Dr. Roderus, of Alerheim, who was called in two days after the appearance of labor, made a diagnosis of extra-uterine pregnancy, and as soon as the patient was able to be removed sent her to the clinic at Erlangen—this was on the fifteenth of April.

The patient was a woman of graceful build, with a slightly developed panniculus adiposus, and had evidently lost a considerable amount of strength. An examination of the heart and lungs gave no evidence of of any pathological condition. From the poorly developed breast a secretion could be pressed. The abdomen was enlarged and appeared as it normally would in the last month of pregnancy. The greatest circumference of the abdomen was 97 centimetres. It was hard and resistant to pressure. On account of the distention of the abdomen the various parts of the fœtus could not be located. The vaginal mucous membrane was relaxed and of a bluish color. The cervix was sufficiently enlarged to permit of the introduction of a finger, and bimanual examination easily revealed the fact that although the womb was enlarged to twice its normal size, it was empty and pressed against the left wall of the pelvis by the tumor. The left tube and ovaries could be easily distinguished by palpation, and were normal. The tumor containing the fœtus was attached to the right apex of the uterus by a stout thick pedicle. No ovary could be distinguished by palpation on this side.

The diagnosis was, of course, that of extra-uterine pregnancy, and its seat the right tube or ovary.

As all fœtal movements had ceased since the twentieth of March, it was taken for granted that the fœtus had died at that time.

* Delivered at the Woman's Clinic of the University of Erlangen, and translated from the *Munchener Medicinische Wochenschrift.*

In view of the rapidly decreasing strength of the patient, and the fact that she was constantly suffering with severe abdominal pains, an early laparotomy was decided upon in order to extirpate the fœtal sac.

The operation was performed on April 24, 1891. The abdomen was opened in the line of the linea alba, the incision being about 30 centimetres long. After the opening of the very thin abdominal wall, a pale red tumor could be seen through the gaping wound. Out of the lower angle of the wound a large quantity of black-brown fluid escaped, which was composed of coagulated blood and meconium, the odor of which being not unpleasant. Almost the entire tumor was adherent to the parietal and visceral portion of the peritoneum, although the adhesions to the anterior abdominal walls could be easily loosened with the hand. This having been done, it was discovered that the fœtal sac had burst at the lower portion of its left side, and that the head and one hand of the fœtus protruded into the abdominal cavity. The next step was to remove the fœtus through this rupture in the sac, and to ligate and cut the umbilical cord. The placenta, however, was left in the sac. The size of the tumor having materially decreased after the removal of the fœtus, the rest of the many adhesions to peritoneum and bowels were easily detached with but insignificant hæmorrhage. The tumor was now lifted out of the wound, and it was seen that it was attached to the uterus by a pedicle nine or ten centimetres long and four or five centimetres broad, and evidently consisted of the tube and the broad ligament. The pedicle was then tied with a number of ligatures and the tumor removed. During the operation a considerable quantity of blood and meconium was emptied from the tumor into the abdominal cavity, this was carefully soaked up with sterilized gauze napkins. Finally, a strip of iodoform gauze was placed from the back of the uterus in the pelvis, to the lower angle of the wound; the incision was then closed entirely, excepting a small point at the lower angle.

The fœtus which had been delivered was female, fully developed and only slightly macerated. It was noteworthy that the placenta occupied nearly half the space within the fœtal sac.

The subsequent course of the case was uneventful. During the first two days following the operation there was a slight elevation of temperature (to 38.2° C.), but after this the temperature remained normal and the pulse tranquil. A considerable quantity of a bloody fluid was drained out of the abdominal cavity by the iodoform gauze strip which had been placed in the wound, necessitating a frequent change of the dressings. On the fourth day the strip of gauze was removed and replaced by an iodoform wick, and this was removed three days later, all discharge from the wound having ceased. Two weeks after the operation the patient was up and about, and eight days later was discharged from the hospital.

Case 2. Mrs S., 31 years old. She had menstruated pretty regularly since her thirteenth year, but the flow had always been rather scanty. She had previously given birth, normally and spontaneously, to two children. Apart from the usual diseases incident to childhood she had had variola at the age of twelve, and typhoid fever during the twenty-first year of her life. She ceased menstruating June 25, 1890, and believed herself pregnant. The course of pregnancy continued undisturbed until October, at which time a series of difficulties appeared. These occurred periodically, and with the exception of brief respites, necessitated the patient's keeping in her bed all the time. These attacks consisted in intensely severe colic-like pains in the abdomen, and fainting fits, which latter were almost invariably occasioned when the patient made an attempt to leave the bed. There was also a constant desire to urinate and defecate, vomiting, etc. This condition lasted until the end of April, and then, since her physician had diagnosed a tumor at one side of the uterus, she was sent by Dr. Lang, of Baneberg, to this clinic.

Mrs. S. was a rather small, emaciated, and ill-looking woman, with a small frequent pulse. Her breasts were rather flabby, the areolæ were brown, but there seemed to be some discharge from them. The appearance of the abdomen corresponded with about the eighth month of pregnancy, the largest circumference being 92 centimetres. The tumor mostly occupied the right side of the abdomen. The fundus of the uterus, which was considerably enlarged, could be felt protruding above the pelvis on the left side. The tumor itself was dense and firm, and it was impossible to distinguish any one part of the fœtus. This, it will be remembered, was also observed in the case previously mentioned. In spite of frequent and most careful examinations no fœtal heart sounds or uterine murmur could be distinguished. Vaginal examination revealed the fact that the cervix was closed and was forcibly pressed to the left side by a tumor which was

attached to its right side extending well down into the pelvis.

The diagnosis was that of an extra-uterine pregnancy already considerably developed. It was impossible to say whether the fœtus was living or not, but the sufferings and increasing debility of the patient pointed to the advisability of an early operative interference.

The operation was performed June 6, 1891. The abdomen was opened in the line of the linea alba, and a dark red tumor sprang into view. The tumor was adherent to the abdominal wall, and in spite of all precautions its sack was slightly cut. Through this cut an almost clear, yellow fluid was discharged in a forcible stream. After the abdominal wound had been enlarged, it was found that the colon was stretched diagonally across the tumor, and its mesentery enfolded by the tumor to a large extent. The entire sack, therefore, was subserous. The mesenteric vessels, greatly distended, ran across the entire upper and forward portions of the tumor. The uterus lay flat against the tumor, and the course of the tube could be traced for about 12 centimetres on the tumor, its abdominal end, however, was lost. Next, an attempt was made to enucleate the tumor in spite of its subserous position, and to accomplish this a large portion of the mesentery of the colon had to be cut away, and a number of vessels tied. This revealed the facts, however, that in the first place the wall of the fœtal sac was uncommonly thin and friable, so that every endeavor to loosen the adhesions with the finger resulted in tearing it further; and in the second place, that the placenta was attached to that part of the fœtal sac which was closely adherent to the colon. Every attempt in this direction caused terrible bleeding, which rendered a continuance of such a course most dangerous. For these reasons the enucleation of the fœtal sac was abandoned. Now the sac was opened at the point which had already been cut, and a pulsating umbilical cord fell from the incision. In consequence of this the fœtus was speedily delivered and the cord ligated and cut. After a few efforts at resuscitation the child revived and began to cry. The position of the fœtus in the abdomen had been such that its head was pressed against the right rim of the pelvic bone, and reached somewhat down into the pelvis, while its breech was to the left under the arch of the ribs. After the removal of the child, a hæmorrhage from the fœtal-sack took place, which flooded the entire field of the operation in a moment, and nothing remained but to tampon the sac with iodoform gauze. The use of a very considerable quantity of gauze was necessitated before the hæmorrhage could be even in a measure controlled. The sac was now sewed to the abdominal wound. This procedure was most difficult, since the opening in the sac extended to the colon. and the uppermost stitch came close up to the bowel. The patient was put to bed almost pulseless, but the action of the heart soon became better, so that any immediate danger was not feared.

The child which had been brought into the world under such strange conditions was rather poorly developed. Its length was 42 centimetres, and its weight 1,880 grammes. It was interesting to note that there was a deep impression in the left parietal bone, corresponding to the place where fœtus had been pressed against the rim of the pelvis. Besides this there was a decided contraction of the right sterno-cleido-mastoid muscle.

The course of the case could not be called other than uneventful. After a few days there were decided symptoms of iodoform poisoning, in the form of a high degree of psychic excitement, which almost reached the extent of maniacal attacks. Apart from this a very frequent pulse and severe headache, and upon examination the urine was found to contain enormous quantities of iodine. In consequence of this the iodoform tampon was removed on the fifth day and replaced by a tampon of sterilized gauze. Now the patient's temperature began to rise for the next few days, and an increasingly disagreeable odor came from the sac. Since the placenta did not spontaneously loosen itself from the sac, its detachment was finally undertaken manually on the eleventh day after the operation. The procedure caused a most threatening hæmorrhage, which could only be checked with great difficulty by means of a new tampon. Several days later the tampon was cautiously removed, at which time there was no further hæmorrhage. Now, a systematic irrigation of the sac with antiseptic solutions was begun, after which it soon became smaller, and the wound was closed at the end of five weeks. The entire healing was not, however, complete until after the lapse of three months, owing to the necessity of a secondary abdominal suture at the upper angle of the wound. This was occasioned by the formation of a fæcal fistula, caused undoubtedly by the needle when the primary suture of the sac to the abdominal wall was made.

The child was fed by the bottle on sterilized milk, and thrived well under the influence of watchful care. For the first six weeks it was kept in a Crédés' "Warm-box"

or incubator, and later during the summer months was secured from loss of heat by warm clothing. In October, it had attained the weight of 3,200 grammes and a length of 49 centimetres. Unfortunately, after it left the clinic it acquired a gastro-intestinal catarrh, obviously from the lack of proper nourishment, and died in two weeks.

A study of the above two cases affords an ample opportunity for judging the remarkable differences of individual cases of extra-uterine pregnancy from an anatomical, clinical, and operative point of view.

I may sum the conclusions I have arrived at, from personal experience, in the following brief sentences:

(1) In well-developed cases of advanced uterine pregnancy, operative interference is indicated in all cases.

(2) In these cases a total extirpation of the fœtal sac should be aimed at, whereas a stitching of the sac to the abdominal wound should only be resorted to in cases of necessity.

(3) It is not advisable to delay the extirpation until the death of the fœtus, but to operate upon every case of extra-uterine pregnancy as early as possible.

CRUSHED FOOT—TUBERCULOUS DISEASE OF THE TIBIA—TUMOR OF THE FACE—SPINA BIFIDA.

By ROSWELL PARK, M. D.,
BUFFALO, N. Y.

Gentlemen: The patient, 24 years of age, was hurt yesterday by getting his foot caught between the bumpers of freight cars. He was taken in the ambulance to the Fitch Accident Hospital, an emergency dressing was applied to the foot and he was then brought here. He has been carried into the clinic-room so that I may make my first examination of him in your presence. There was quite an extensive laceration of the soft parts of the foot and the ambulance surgeon also diagnosed fracture of the tarsus. There was considerable oozing yesterday which necessitated the application of an elastic bandage outside of the emergency dressing. There is quite an extensive laceration over the outer side of the tarsus and the toes are not as warm as the rest of the foot. Still they are not as much discolored as I would expect them to be by this time if their circulation was entirely shut off, and I hardly anticipate gangrene of the toes. There is a large amount of swelling of the foot and with the blood-clot which has now had some twenty-four hours in which to form and which acts as a soft glue to hold the parts together, it may be that unless I disturb the fragments of bone considerably I shall get no crepitus. Now it is no object for me to disturb the process of healing simply to confirm another man's diagnosis unless it is necessary to correct a displacement or unless a change of treatment is contemplated. Steadying the posterior part of the foot and grasping the anterior, I make a slight swaying motion, endeavoring to elicit the sensation of crepitus, as felt by the fingers rather than causing any audible sound. I find no crepitus but inasmuch as the foot is in good position, the apparent protuberance on the plantar surface being merely a swelling of the soft parts, I do not think it justifiable to make any forcible movements. The injury was one by which fracture might easily have been induced, and there is every reason to think that there is fracture of one or more of the tarsal bones. The treatment of any fracture is restoration to the proper position and then physiological rest. The position does not seem to have been much disturbed here and physiological rest will be maintained by the antiseptic dressing and confinement to bed.

If to-day or later there occurs elevation of temperature and chill or excessive pain, or if redness of the skin of the entire foot and ankle or small red lines indicating phlebitis and periphlebitis are seen extending upward from the foot, I shall fear sepsis, and in that case the indication would be to anæsthetize the patient at once, to explore thoroughly and meet any indication that might arise, even the removal of the whole foot. There is no reason, however, to fear such a disastrous result in this case. I speak of it only as a possibility against which we must guard.

[The foot was dressed with iodoform ointment and powder and over that layers of bichloride gauze and cotton, the whole held on by a roller bandage. No untoward symptoms developed, and the patient in time recovered full use of the foot.]

TUBERCULAR DISEASE OF TIBIA.

Two weeks ago I chiseled out the lower end of this young man's tibia and allowed the opening to fill up with blood-clot. The case was one of osteo-sclerosis, a consolidating form of tuberculosis of bone, corresponding to fibroid phthisis in the lung. All active tubercular elements had probably been long ago strangulated out by the activity of the cells of the part. The boy has had some pain since the operation, but not nearly as much as he suffered before entering the hospital, and we are now about to dress the wound for the first time. We find here a

quantity of pus, or rather of puruloid material, for there is no reason to believe that this matter has any septic element in it, otherwise we should have had signs of a general septic condition, and there would be redness of the limb and red lines indicating the extension of infection by the lymphatics. No signs of such trouble are to be seen here. I now spray out the wound with a hydrogen peroxide solution and find perfectly healthy granulations. Yet there has not been the perfect organization of the blood-clot and incorporation of decalcified bone which I had hoped for. The question naturally comes up whether there was lack of precaution in shaving and disinfecting the field of operation or in the operation itself and the dressing. Certainly as far as is possible in human affairs, we observed every means of avoiding the entrance of micro-organisms, and the appearance of the wound was not such as to lead me to think that any true septic process had taken place. A surgeon is often in a quandary to know just when to remove a dressing. When a wound heals perfectly by first intention under one dressing—as you have often seen illustrated in these clinics—he says, "I did right in not touching the dressing before." When it does not heal so nicely he says, "I ought to have dressed the case sooner."

But although there has not been the ideally perfect result hoped for, this large wound has been more than half filled up with granulations, there has been no sepsis, the pain has been relieved, and there is the surety of the complete cure of the condition subsequently by the growth of these granulation. In short, neither have we nor has the patient anything to complain of. I will now reapply an antiseptic dressing, and the leg will have to be dressed oftener for a few days.

TUMOR OF THE FACE.

This young man, seventeen years of age, shows a scar across the cheek where he was kicked with the calk of a horse's shoe three years ago. The wound healed readily, but a year later the parts underneath the scar began to swell, and he comes to me now with a protrusion of that part of the face by what is evidently some neoplasm. This new growth has lasted two years, has enlarged very slowly, has presented at no time any of the signs of inflammatory action, so that we can practically leave out of consideration all thought of abscess, even of cold abscess. On further examination I fine the nostril free, and the tumor which is very soft and fluctuating is movable over the anterior wall of the antrum of Highmore. At first glance, the tumor looks like a protruding growth from the antrum, but if it came from the antrum and had grown so far into the mouth, it would also protrude into the nostril, and obstruct breathing. It is outside the bone and beneath the skin. The diagnosis, then, is narrowed down to fatty tumor and cyst. It is an unusual location for a lipoma, and while I have not tapped it, I presume it is a cyst, but proceeding from exactly what place, I do not know. It does not necessarily follow that it is the result of the kick received the year before, but previous history of injury is always suspicious, and one naturally ascribes such a lesion to the consequence of a blow. Probably we are often in error in so doing.

But the consideration of the etiology of the tumor is comparatively trivial for its presence and the indication for its removal are patent facts. I could go through the external scar and leave not much greater disfigurement than already exists but I contemplate attacking the growth from within the mouth. This method is a little harder for the operator but better on account of the looks of the patient. I find also a scar on the check which shows that the old laceration must have extended entirely through into the mouth. A quantity of thick mucoid material exudes from the opening which I have made into the cyst. I now place my finger in the cyst cavity and tear out as much of the lining membrane as I can, completing the removal with the forceps. It is always important to dissect away the cyst wall in order that the cavity may be closed completely and permanently by the healing process, and the tougher the membrane the greater the necessity of removing it. The cyst, you see, was nearly as large as a hen's egg.

SPINA CIFIDA.

Here is a tumor, evidently congenital, as the history confirms it to be, occurring in the middle line of the back of a small child and bearing marks of its dermoid if not teratomatous character in the growth of hair about it. It is movable and from the appearance we can not say whether it is a spina bifida or whether it is entirely outside the spinal canal. Besides spina bifida proper, which implies a congenital defect in the laminæ of the vertebræ, there is a similar condition known as hydro-rachitic cyst, which means a cyst communicating indirectly by a small passage, perhaps quite long, with the spinal canal. This passage may go between the vertebræ and does not necessarily imply

any trouble with the development of the spinal column. The mother says that whenever the child gets irritated and cries—which produces some cerebral congestion—this tumor enlarges, as if with the fullness of the cerebral circulation, fluid was forced out of the cerebro-spinal cavity and into this tumor. This lends probability to the supposition that it is a spina bifida or hydro-rachitic cyst.

The hair grows widely around the tumor and for scientific purposes I should like to retain the hair on the specimen, but the child's interests take precedence and we will therefore shave the hair off as a part of our aseptic precautions. The child will probably always have more or less of a dorsal beard. The cyst I find by palpation to be very thin walled and it is quite unlikely that the boy can go through the terrors and pleasures of child-life without its being ruptured, and if it connects with the spinal canal as it seems to, rupture would probably mean death within forty-eight hours.

On exposing the cyst wall, I find that the tumor has a pedicle about an eighth of an inch in diameter and I will tie this tightly before opening the cyst and in order to preserve the contour of the sac till we open it. I will tie another ligature a little higher up and cut between. After removing the cyst, there seems to be no leakage from the pedicle. This is an unusually favorable case for operation and I have closed up the external opening tightly without drainage.

EXTIRPATION OF A TUBERCULOUS KIDNEY.

Schuchardt(*Deutsche medicin. Wochenschr.*, Sept. 3, 1891), at the Congress of German Surgeons, reported a case of cystitis in the course of which pyonephrosis developed. Incision afforded but temporary relief. Tuberculosis was suspected, and confirmed by reaction to tuberculin. Other treatment failing, the kidney was removed. Following the operation the excretion of urine was diminished, uremic symptoms appeared, and on the fifth day the urine was suppressed. Death took place on the ninth day. At the autopsy the pelvis of the kidney was found occupied by calculi; the renal structure was almost entirely wanting. Histologically, no changes were found that could be ascribed to the action of tuberculin; the giant-cells were in places disintegrated by the invasion of leucocytes; but bacilli were still to be found. Necrosis of the epithelium of the remaining kidney was the probable cause of the development of uremia.

COMMUNICATIONS.

THE USE OF GELATINE DISCS IN THE EYE.*

By JOHN S. STEWART, M. D.,
OPHTHALMIC SURGEON TO THE PHILADELPHIA LYING-IN CHARITY.

Some excuse, perhaps, may be needed for bringing before this Society a subject which can be of practical interest to specialists of one department only; but it has occurred to me that a very brief account of one of the methods of applying medicaments to the eye, which, in my hands at least, has proven highly satisfactory, may be not altogether devoid of interest even to those engaged in other lines of work. I refer to the use of medicated gelatine discs, and in the present instance will consider only the advantages of applying homatropine and cocaine to the eye by this means. Four years ago, in an article on the subject "Homatropine," published in *The Medicale News*,† I called attention to the fact of having frequently observed an irritant action exerted on the deep structures of the eye by repeated applications of a watery solution of hydrobromate of homatropine. At that time it was my belief that this irritation was the principal cause why ametropia cannot be accurately estimated in very many cases where homatropine has been employed, and a considerable experience since in the use of watery solutions of the drug tends only to confirm this opinion. That irritation is produced in every instance by this method of practice, I do not pretend to say; but I am convinced that in all cases where there has been considerable and long-continued eye-strain, from efforts to overcome particularly aggravating forms of refractive error, or where chorio-retinal irritation, due to other causes, exists, the homatropine as ordinarily used very often adds to the intra-ocular disturbance, and thereby interferes with attainment of the object for which it was employed, viz.: the accurate estimation of the refraction of the eye.

Another objection which I have to the use of watery solutions of this drug is that a large proportion of the effort is expended on the nasal and pharyngeal mucous tract rather than on the eye, as intended. There is no doubt in my mind that both the irritant effects on the eye and the, at least, unpleasant ones of the nose and throat are directly due to the necessarily strong solutions employed

*Read before the Philadelphia County Medical Society, March 23d, 1892.

†March 3, 1888.

—ranging, as far as I have been able to learn, from eight to twenty-four grains to the fluid-ounce—instilled in most intances a number of times within an hour.

It is claimed that medicated gelatine discs for ophthalmic use were first made in 1863 by Savory & Moore, of London; but, strangely enough, they have never been extensively used. About five months ago I began to try some of those made at the suggestion of Dr. C. A. Wood, of Chicago, by Messrs. Wyeth & Brother, of this city, and almost ever since, when I have had occasion to use homatropine alone or combined with cocaine for the purpose of refractive work, I have much preferred these discs to the watery solutions formerly used by myself.

On first thought it may seem unlikely that a single disc, containing $\frac{1}{30}$ grain each of homatropine and cocaine, could exert sufficient influence on the accommodative power; but I have, in most instances at least, found as nearly complete paralysis of accommodation as I have ever been able to obtain with repeated instillations of 2 and 3 per cent. solutions of homatropine. The reason is not hard to discover. Absorption of the drug by the tissues of the eye takes place about as rapidly as the drug itself can be liberated by the dissolving of the gelatine; but when a drop of solution has been instilled, a large proportion necessarily escapes with the tears, or, if it does not get away so quickly, is quite likely to produce in sensitive eyes the chorio-retinal irritation which so often interferes with obtaining to results for which the drug was used.

Very few of my patients who had these discs in their eyes could detect any effect whatever in the nose or throat, and in these few instances the information was obtained only by questioning the patients on the subject.

In my practice at the present time, in all eyes suitable for the use of homatropine and requiring its use for the purpose of refraction, I am making use of discs containing $\frac{1}{30}$ grain each of homatropine and cocaine—either of hydrobromate and muriate respectively, or the alkaloid of each. I have found it an advantage, but not always a necessity, in the case of most of my patients under twenty-five years of age, to insert a second disc of homatropine only ($\frac{1}{30}$ grain) in each eye as soon as the first is entirely dissolved—usually in about ten minutes. A small camel's-hair brush moistened serves conveniently to convey the disc to the eye, and although it has been recommended to place he disc against the scleral conjunctiva—in the grasp of the lower lid—I much prefer raising the upper lid and inserting the disc beneath it, immediately above the outer canthus, then directing the patient to keep the lids lightly closed as in sleep, and to avoid winking until the discs are dissolved.

It has been urged against the use of the gelatine discs that the lids and eyes are thereby rendered very sticky and uncomfortable.

My patients have not complained of this; but I think the annoyance was escaped, in a large measure at least, by strictly following my injunction about keeping the eyes closed.

As to the reputed advantage of the combination of cocaine with homatropine, I have little to say. It is claimed, of course, that homatropine combined with cocaine dilates the pupil and paralyzes the accommodation more rapidly and effectively than homatropine alone, and that these results are more permanent. This seems usually to be the case; but cocaine is used by me in these cases because of the quieting effect it produces on most eyes, thus tending, in some measure at least, to overcome the irritant effect of homatropine, and at the same time to facilitate the measurement of the ametropia.

In conclusion, it should be added that on several occasions I have used the English preparation of Savory & Moore, of London; but there is no hesitation on my part in expressing a preference for the Wyeth discs.—(*For discussion, see Society Reports.*)

THE TREATMENT OF PNEUMONIA.

In the *Edinbury Medical Journal*, 1891, No. clxxxvii. p. 393, Dr. George W. Balfour presents an instructive paper advocating the use of chloral combined with digitalis; the avoidance of preliminary purgation; the moderate use of digitalis to prevent cardiac collapse and as an antipyretic, with chloral to combat the insomnia, pain, and cough. The precise method is Liebreich's chloral—none other being regarded by the writer as safe—dissolved in infusion of digitalis. For an adult twenty grains of chloral dissolved in half an ounce of infusion of digitalis, in four hours ten grains in the same amount of infusion, and so continued until the temperature falls to the normal, when it is replaced by an appropriate tonic. A jacket poultice is a useful adjuvant, which may be, however, replaced by a sheet of cotton-wool. Suitable diet cannot be dispensed with.

SOME CASES OF OBSTRUCTIVE DISEASE OF THE LACHRYMAL PASSAGES AND THE ASSOCIATED INTRA-NASAL LESIONS.*

By G. E. de SCHWEINITZ, M.D.,

Professor of Ophthalmology in the Philadelphia Polyclinic; Lecturer on Medical Ophthalmoscopy, University of Pennsylvania; Surgeon to the Philadelphia Hospital, etc.

The intimate relationship between diseases of the lachrymal apparatus—that is, of the drainage system of the eye—and various types of inflammatory changes in the nasal mucous membrane is an old story. Indeed, the close association of ocular and naso-pharyngeal disease is not limited to these conditions. The great majority of phlyctenular ophthalmias depend upon type of rhinitis, and are often the direct outcome of adenoid growths in the pharynx. Many obscure symptoms which we are wont to describe under the general term asthenopia, have been shown to depend upon intra-nasal disease, and a variety of orbital, ocular, and post-ocular pains are frequently "referred pains;" that is, their origin is from some lesion within the nasal cavity, the frontal sinus, ethmoid cells, or antrum of Highmore. In fact, as Harrison Allen has remarked, a good deal of the success of treatment depends upon a proper attention "to the commonality of the various parts of the cephalic mucous membrane."

The following cases are reported, not because they illustrate new points, but because they emphasize some old ones, and still more because they emphasize that the cure of obstructive lachrymal disease is materially facilitated not merely by the ordinary measures adopted for rendering the passages patent, in association with what may be called routine intra-nasal treatment (for I take it no one attempts to treat lachrymal disease without due attention to the nasal mucous membrane), but that more radical measures are frequently of value when applied to the nasal chambers and the vault of the pharynx, which in the vast majority of cases are the regions primarily affected.

Case I. *Purulent dacryocystis; traces of old rhinitis and abnormal shape of the lower turbinated bone.*—D. D., a boy aged seven years, reported for treatment November 3, 1890. Three years ago pus began to exude from the right punctum lachrymale, and in spite of treatment this condition has continued ever since. The boy was healthy in other respects; he had never suffered from measles or scarlet fever; was free from the evidence of inherited syphilis, and sustained no injury. His voice was slightly nasal in tone.

The lower caniculus was slit, and a firm stricture was found at the beginning of the nasal duct. The probe was not forced; neither was the stricture incised.

The patient was referred to Dr. Alexander MacCoy for nasal examination, who reported as follows: "The right nostril shows an abnormal shape of the lower turbinated bone, also some evidence of a severe rhinitis during the past. I believe that the position and form of the lower turbinated body have had much to do with the disease of the duct on account of the obstruction to its entrance at its lower portion into the nasal chamber. The boy also has a pharyngeal tonsil, which obstructs the posterior nares somewhat." Dr. MacCoy undertook the treatment of the nasal condition, and after a few days the stricture was incised, the probe passed, aud the nasal treatment instituted. After the intra-nasal obstruction was removed the epiphora ceased, and has not reappeared.

I have referred to this case in a paper on the use of pyoktanin in dacryocystitis (*University Medical Magazine*, vol. iii. p. 181), and may repeat that my colleague, Dr. Gould, as well as myself, has had favorable effects from this drug in the treatment of unhealthy lachrymal secretions.

The case is now utilized, however, to illustrate what seems to me a very important point to which Dr. MacCoy calls attention in his report, namely, that although the stricture of the duct, which in this case existed high up, was penetrated, and although the fluids and the probe passed readily, the epiphora continued because of the malposition of the turbinated bone. Indeed, this obstruction sometimes exists only in the form of a small flap of mucous membrane, which closes the entrance of the duct into the inferior meatus very much as a valve would do. This effectually prevents the drainage of the eye, and unless it is removed good results will not follow. In this particular instance it was very easy to see the obstruction by first passing a probe and then exposing the entrance of the duct into the meatus by means of a nasal speculum—a slight precaution which will often lead to the discovery of the cause of a persistent overflow of tears in spite of apparent permeability of the passages.

*Read before the Philadelphia County Medical Society, March 23d, 1892.

Case II. *Catarrhal dacryocystitis; bands of adhesion from the inferior turbinated body to the septum.*—Ella H., aged twenty-eight years, reported for treatment at the Philadel- Polyclinic, October 24, 1891, on account of an inflammation of the right eye, which had existed for several days. There was a small abscess at the inner margin of the lower lid, with a fistulous communication into the lachrymal sac. A free muco-purulent secretion distended the sac in the form of an ordinary mucocele. The canaliculus had been slit at some previous time, but a probe did not pass readily.

She was referred to the throat department, and examined by Drs. Arthur Watson and Walter Freeman, who reported as follows: "Atrophy of both inferior turbinates; unable to obtain a posterior view; former ulceration of the posterior wall of the pharynx; bands of adhesion from the inferior turbinates to the septum; also one from middle turbinate to the septum on the right side."

Even in absence of definite history the pharyngeal condition seemed to indicate syphilis. The patient was ordered an astringent lotion, given potassium iodide and bichloride of mercury, and referred to the throat department for treatment. In January of this year an operation was made on the lower turbinated bone, and the condition has improved without the passage of probes, the secretion and epiphora having materially lessened.*

This case, it seems, illustrates the ordinary intra-nasal lesions which were evidently at the bottom of the lachrymal trouble, and is further interesting because these lesions gave confirmatory evidence of the syphilitic condition, so much so that relief was facilitated by the proper constitutional remedies.

Case III. *Lachrymal abscess; spur on the septum opposite the middle turbinated bone; chronic pharyngitis.*—Sarah S., aged forty-five years, reported for treatment at the Philadelphia Polyclinic, November 24, 1891. In April, 1891, epiphora began in the left eye, for which she seems to have undergone no treatment. It continued until about one week ago, when suppuration of the lachrymal sac took place. When she presented herself there was a marked lachrymal abscess. The pus was evacuated by an external incision, the sac freely irrigated with an antiseptic fluid, and the patient referred to Drs. Watson and Freeman for an examination.

They reported as follows: "On the left side there is a spur on the septum opposite the middle turbinated bone; also hypertrophy of the tissues. The turbinates are small. There is chronic pharyngitis, a thick phlegm covering the tissues."

Unfortunately this patient has failed to report with any regularity, and the ultimate result cannot be given. This example illustrates the course of so many of these cases, namely, a chronic pharyngitis and hypertrophy and inflammation of the intra-nasal mucous membrane; involvement of the lachrymo-nasal duct; epiphora, owing to an obstruction primarily from swelling of the mucous membrane, and later from the formation of a positive stricture. Under the influence of the pressure and of the stricture, the fluids of the conjunctival sac are not drained, but distending the lachrymal sac, become infective, an abscess forms, and the condition which has been described results.

Case IV. *Epiphora; atrophic catarrh.*—Jane C., aged sixty years, reported for treatment at the Philadelphia Polyclinic, November 14, 1891, complaining of pain in her eyes, constant epiphora, and inability to read on this account. There was considerable hypermetropia and some astigmatism, and, as epiphora is frequently caused by the strain of uncorrected ametropia, proper glasses were ordered, but the overflow of tears continued. Both canaliculi were then slit. There was narrowing of the ducts, but no stricture, and probe and fluids passed readily. The epiphora improved, but did not disappear.

She was referred to the throat department, and the following report was received: "There is an atrophic condition on both sides, and a spur on the septum on the right side near the opening of the lachrymal duct, but it does not interfere. The closure is probably due to contraction from atrophic changes."

This is a good exrmple of a very common condition, most frequent in elderly people, where there is neither disease of the sac, stricture of the duct, nor pressure from a spur or hypertrophy of the turbinated bodies, but where the obstruction depends upon contraction from atrophic changes.

Case V. *Phlegmonous dacryocystitis; deflection of the septum; spur on the left side pressing on the inferior turbinated bone.*—Matthew L., aged twenty-seven years, presented himself for treatment on account of an extensive lachrymal abscess with a small opening and widespread infiltration of the tissues, producing a large swelling involving the lower lid and cheek. The abscess was incised, the pus cavity freely washed out, and an antiseptic dressing applied. In a day or

* Recently there has been a relapse in this case. Attention to treatment has not been regular.

two the swelling had subsided, and nothing remained but a slight brawniness of the tissues and a fistulous opening at the point of incision. The canaliculus was slit, but all efforts to introduce the probe prove futile. The patient had been much exposed to weather; had a history of an old injury, but denied syphilis. The obstruction to the tear passages had existed since the early fall.

He was referred to the throat department, and the following report was received: "The septum is irregularly deviated in front; there is a spur on the left side pressing on the inferior tubinated body, which also contains an ulcer in its anterior portion."

He was warned that "catching cold," which would increase the nasal obstruction, would certainly bring about a relapse of the abscess. He went to work, however, and returned a few days afterward with all of the lesions previously described in a very much more aggravated state. The same treatment was instituted, and he was again referred to the throat department, and on the 23d of February the hypertrophy on the left side was removed. On the same day a probe was passed, and since this time its passage has been repeated. Epiphora still continues, but is decreasing day by day.

This example illustrates the mechanism of relapse in many of the tear-passage cases, in this instance producing a very serious phlegmonous inflammation. Under treatment and rest sufficient drainage takes place to produce amelioration of the symptoms; then swelling from congestion, owing to exposure, is added to the organic obstruction already present, producing complete closure with an exacerbation such as has been detailed.

Case VI. *Stricture of the nasal duct; moderate hypertrophy of the inferior turbinated on the left side and a spur on the right side.*—Bridget R., aged fifty years, applied for treatment to the throat department of the Philadelphia Polyclinic, and the following lesions were found: A moderate amount of hypertrophy of the left inferior turbinated near the nasal duct, and a spur on the septum of the right side close to but not obstructing the opening of the duct. With these lesions there were epiphora, most marked in O. D., and slight lachrymal conjunctivitis. She had not been able for a number of months to use her eyes with any comfort.

She was referred by Drs. Watson and Freeman to the eye department. The canaliculi were slit, and a stricture was found at the mouth of each sac. A No. 2 Bowman's probe was passed without difficulty.

It is evident that although there were lesions in the nasal passages, they were not obstructing the duct, but under the influence of the chronic nasal inflammation a stricture had formed in the lachrymal canal.

Case VII. *Epiphora from swelling of the mucous membrane of the lachrymo-nasal duct; atrophic rhinitis.*—A. K., an unmarried woman, aged twenty-six years, was referred to me by Dr. Ralph W. Seiss, on account of epiphora of the right eye, which had persisted for some time in spite of the nasal treatment. There was no swelling of the lachrymal sac; no catarrhal or purulent secretion, but simply an overflow of tears. The general health was good, the eyes not far from emmetropic, and there was neither asthenopia nor headache.

Dr. Seiss has kindly furnished the following report of the nasal lesions: "Atrophic rhinitis presenting the ordinary appearances of tissue-destruction, combined with some odor and much secondary laryngo-bronchitis."

The canaliculus was slit, and a No. 3 Bowman's probe was passed without meeting a stricture, but with a resistance to its passage which is characteristic of obstruction from swelling of the mucous membrane. After the passage of this probe the duct was irrigated on several successive days with a solution of boracic acid and common salt without, however, passing the canula into the duct. The fluid trickled readily through the nose. The epiphora stopped after a few treatments, and has never returned, although many months have gone by since she originally reported.

The patient represents a common class of cases of epiphora associated with chronic inflammation of the naso-pharynx. A somewhat similar inflammation occurs in the nasal duct, but does not produce a true stricture; the occlusion is from swelling, not from cicatricial changes. In many cases it is sufficient to do what was performed in this case; in others even milder measures suffice. Above all things, this is an example of a class of cases the successful treatment of which I have learned especially from Dr. Risley, by obeying the principle which he was wont to instil not to be too ready to pass probes and canulas, lest their introduction scrape away some of the mucous membrane, and really do more harm than good. It is unnecessary to do more than medicate the swollen mucous membrane with any solution that is suitable; I like boracic acid and common salt very much.

Many more cases might be quoted, but these seven representatives of various classes

are sufficient to illustrate the points which I desire to make:

1. A large class of cases exists characterized chiefly by epiphora without catarrhal or purulent secretion, in which the obstruction in the lachrymo-nasal duct depends upon swelling of its mucous membrane, and not upon true stricture. The primary origin of these cases in the great majority of instances is a chronic or subacute post-nasal catarrh. The evident indication is the treatment of the latter condition and the medication of the swollen mucous membrane of the lachrymo-nasal duct, so that it may regain as nearly as possible its natural condition, which it will do without much instrumental interference—an interference that may of itself, if unskilfully performed, be the cause of a cicatrizing band that never originally existed. Case VII. of the series illustrates this class.

2. The life history, if I may so express myself, of many cases of obstructive disease of the lachrymo-nasal duct and the formation of a lachrymal abscess is illustrated by Cases III. and IV. First, a chronic pharyngitis occurs; later, hypertrophy and inflammation of the intra-nasal mucous membrane, followed by swelling of the lining tissue of the lachrymal duct. Gradually cicatricial changes arise, and a true stricture is formed. The drainage of the conjunctival cul-de-sac ceases; the micrococci natural to the part, and those which readily find access to this region, permeate the contents of the lachrymal sac because this can no longer be emptied; the pathogenic microörganisms exercise their true function, and suppuration occurs.

3. A number of cases develop, chiefly in old people, in which there is epiphora, again without the presence of pus or muco-pus, depending upon obstruction in the lachrymal duct from atrophic changes, the whole being part of a similar atrophic process in the intra-nasal passages, and generally described under the term atrophic catarrh. The obstruction in these instances is not from swelling, not from stricture, but from contraction. Case IV. of the series is an example.

4. A very common cause of an exacerbation of lachrymal disease is due to the presence of a hypertrophic turbinated body, or similar intra-nasal obstruction, which under treatment has gradually subsided, but which, owing to exposure, swells up again, and exercises its obstructing influence. At once there is occlusion of the lachrymal passages and recrudescence of the symptoms. The very serious nature of such cases is illustrated in case V. of the series.

5. In every case of local disease the physician should be mindful of constitutional causes: the value of confirmatory evidence by pharyngeal and intra-nasal examination is illustrated in Case II., an example of constitutional syphilis. Local treatment may be very necessary; local treatment without general medication is ineffectual.

6. Finally, I come to the class of cases in which there exists an obstruction at the intra-nasal end of the duct (it may be trivial), permeable by the fluids used in a syringe, but an impassable barrier to the outflow of tears. Even the slightest obstructions, under these circumstances, may defeat the most classical treatment of lachrymal disease. The ready detection of such a lesion is illustrated in Case I. of the series.

It has not been my intention this evening to refer to what are the best means of treating lachrymal disease, except in so far as these are implied by the descriptions of the lesions which existed in the examples I have reported. Whether we believe that small or large probes should be passed; whether we class ourselves with those who believe that the probes should not be used at all; whether we are the advocates of this or that antiseptic and astringent fluid; whether we think that strictures should be incised or should not be incised, or whether we believe in the permanent wearing of styles or canulas, it is evident that the rational treatment of certain types of obstructive lachrymo-nasal disease must also include not alone the ordinary intra-nasal treatment with sprays and powders, but a systematic and thorough examination of the naso-pharynx, and, if necessary, the best operative interference known to intra-nasal surgery.—(*For discussion see Society Reports.*)

ANTIPYRIN IN HEMERALOPIA.

Hemeralopia, or night blindness, is an inability to see after sunset, during the night or during the day if the locality is dark. This affection which accompanies pigmentary retinitis, begins usually about the age of 18 years, and generally attacks all members of the same family; it is incurable. Grandclement has discovered by accident the efficacy of hypdoermatic injections of antipyrin in these cases; he employed them in three patients affected with the symptomatic hemeralopia of pigmentary retinitis, after a treatment with antipyrin. The three patients who had been compelled to give up their occupations, were soon able to go back and resume their work.—*Annales d'Oculistique*, 1891, p. 232.

THE AFTER TREATMENT IN ABDOMINAL SECTION.

By J. A. PRINCE, M. D.,
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It is not my intention in this paper to consider any routine practice in these cases, but a few of the more important symptoms that may arise.

Though the majority of these cases recover with an uneventful convalescence, cases are now and then met with which tax the resources of the operator to the utmost and may even require a secondary operation for the relief of some urgent symptom.

Among the more important complications that may arise that may demand active interference may be mentioned in the order in which they will appear; shock, secondary hæmorrhage, the various forms of sepsis, and obstruction of the bowels.

Since the introduction of the aseptic methods in conducting operations, septic complications are not so frequently met as some others, notably, obstruction of the bowels.

In a recent paper read before the New York Obstetrical Society by Dr. Hanks, of New York, he estimates the mortality from this latter cause at the enormous rate of 50 per cent. With the old form of treatment, that of locking up the bowels with opium for a week following the operation, this result would not be surprising, but with the forms of treatment employed to-day, where the bowels are opened early and kept open, such a figure seems to me to be too high.

When these operations are performed in the general hospital the question of securing a capable nurse need not be considered, but these operations are being done, more now than ever before, by men who do not have hospitals to which they can send their patients, and commonly the patients are too poor to afford the luxury of a trained nurse even if one were obtainable. It remains for the physician to secure some one who has had some experience in nursing, and carefully instruct her as the case progresses.

A young woman should be preferred, one who can learn quickly and can be depended upon to carry out instructions to the letter. A graduated nurse, being well posted in all the branches of the medical sciences, sometimes becomes liable to do a little prescribing on her own account because she thinks a certain thing is indicated.

It is probably for this failing, and the fact that they are not so easily moulded into your ways of nursing, that most operators prefer nurses who are more or less ignorant of materia medica and therapeutics, and have gained what knowledge they possess by practical work at the bedside.

When the operation is done in the hospital there is the additional advantage of the supervision of the house surgeon, while if done at the home of the patient without the benefits to be derived from trained nurses, the surgeon must give the after treatment his own supervision and care.

As the course and termination of these cases is dependent upon modes of operating, it will be necessary to consider some points in the technique of the operation bofore proceeding with the subject of the after treatment.

It is generally considered that the toilet of the peritoneum is one of the most important steps in the operation, but, while admitting its importance, I think many lives are needlessly lost from shock due to the increased time spent in thoroughly cleansing the peritoneal cavity by means of flushing.

It is a question in my mind whether flushing has any advantage over simple sponging with sterilized sponges or gauze.

Blood clots and the materials which escape from the cysts adhere to the viscera very tenaciously, and, while flushing readily removes the free blood, it removes the clots with difficulty; they adhere, however, readily to the sponge or piece of gauze, and can be easily and quickly removed.

The fluids used in the flushing have no antiseptic properties usually, being weak solutions of boric acid or sterilized water, and are used simple for their mechanical effect in removing the foreign materials.

The care of the intestines during the operation has a very important bearing upon the after treatment. They should be subjected to as little injury and exposure as possible. I think it is the opinion of most operators that the intestines should be retained in the abdomen, if possible, and should much gaseous distention be present, it is better practice to puncture and let the gas escape than to take the intestines out of the cavity. Some traumatic peritonitis, usually localized, follows the operation as a rule, and accompanying it is the effusion of more or less plastic lymph rendering the coats of the intestines sticky and necessarily limiting the movements; where adhesions occur the motions are prevented entirely.

If anything could be introduced into the peritoneal cavity which would facilitate the free movements of the intestines and prevent the effusion and organization of the lymph many cases of bowel occlusion might be pre-

vented, Boroglyceride has been advocated largely for this purpose, with the additional advantages of its antiseptic properties. But it was to be introduced, subsequent to the operation, through the drainage tube, and a little at a time. As the immediate space about the drainage tube is soon shut off from the general cavity, I think it is evident that it would act more efficiently if introduced at the time of the operation.

In Dr. Martin's Private Hospital in Berlin, olive oil is extensively used for this purpose. It is the practice there to saturate a large flat sponge with the oil and introduce it over the intestines while the deep sutures are being placed in the abdominal walls. During the manipulations much of the oil escapes and forms an oily coating over the viscera, the free oil accumulating at the bot- of the pelvis, where it remains as a reserve supply. How long the oil remains in the cavity before being absorbed I do not know. I have seen it coat the surface of the blood, removed through the drainage tube, as late as the end of the second day.

If several ounces were introduced I should think enough might remain to prevent adhesions forming. Olive oil is not an antiseptic agent, that I am aware of, but it is a medium in which germs do not thrive.

The subject of drainage is such a discussed one, and the profession are about equally divided on the subject. About as good results are obtained by those who do not drain as those who do. The use of the drain complicates the after treatment somewhat, but if much oozing is expected it is better to be on the safe side and have some outlet provided for the escape.

The effused material might safely be gotten rid of through natural channels, especially when aided by the early use of cathartics to stimulate the osmotic flow outward through the intestines.

In an uncomplicated case the treatment will be nothing more than good nursing.

The first symptoms to require attention, if the operation has been more than usually severe, or has consumed much time, will be shock. It has been my observation that shock is more directly influenced by the length of time consumed in the operation than by any other factor.

In my father's practice time was sacrificed to thoroughness and the observations of many details, and nearly all cases manifested some symptoms of shock. It was successfully combated, however, in most cases by the aid of hot bottles and the administration of stimulating injections of whiskey and digitalis.

During the last year of his practice he experimented largely with oxygen, administered by the rectum, to promote reaction, with very good results, the absorption of the gas causing an increase in the volume of the pulse almost instantly, and sensibly shortening the period of depression.

In a large number of operations witnessed in Dr. Martin's clinic last summer, I noticed that he rarely had shock to deal with, no depression of temperature being shown on the charts. This result was not because there were no difficult cases met with, because many were extremely complicated, but because of the rapidity with which he operated. He rarely exceeded fifteen or twenty minutes, even in the most difficult cases, while simple ovariotomies were completed in from seven to ten minutes with no apparent effort to hurry the operation.

It may be of interest to some to have a short description of his methods. In the first place, a glance at Dr. Martin would never give one the idea that he was so skillful a gynæcologist, as he is a man of great size with large fleshy hands and an enormous abdomen. Through some accident he lost the use of one eye, and in order to see an object closely he is obliged to turn his head slightly; but with these apparent defects he is a most skillful diagnostician and operator.

Only second to Dr. Martin in efficiency and skill is his invaluable assistant, Frau Horn.

All the abdominal operations are done in a small room especially devoted to this work. Everything is kept scrupulously clean. The patient is placed upon a small table made of iron and devised for this work by Frau Horn. The top is of iron slats, and the middle ones are hinged and drop down to facilitate the application of the dressings. The table is just long enough to support the patient's body from the buttocks to the head.

Dr. Martin sits at the foot of the table, between the thighs of the patient, which are supported across his knees. His chief assistant sits on the right side of the patient, and ties all the sutures as they are taken. Frau Horn has entire charge of all the instruments, dressings, etc. The primary incision is made large enough to admit the entire hand of the operator, and seldom has to be enlarged even to admit the escape of very large tumors.

No attention is paid to hæmorrhage from the incision, the peritoneum being opened at once, as he considers the dangers from a prolonged operation greater than those which might occur from the escape of a little blood

into the peritoneal cavity. It surely must be because of his great speed in operating that shock is so seldom seen in his hospital.

The vomiting so rarely absent in these cases, is relieved more surely by time than by any medication. Since Tait has introduced the early use of small doses of sulphate of magnesia in these, it has been found that some cases of nausea are relieved by it. I do not think it increases it in any case.

The bowels should be opened early and kept open, and for this purpose there is nothing better than the remedy we have just spoken of. I have had very good success with it in dessert-spoonful doses of a saturated solution repeated every hour from six to eight hours, followed, if necessary, by a small enema containing a little of the salt.

The treatment of secondary hæmorrhage is, of course, to secure the bleeding point as soon as possible, but before subjecting the patient to the risk attending a secondary operation, all other possible causes for the symptoms should be excluded. Poisoning from the absorption of carbolic acid has been known to produce almost identical symptoms. The discoloration of the urine in the poisoning from carbolic acid, will, however, differentiate it.

Sepsis is the most surely fatal of all the complications, as there is no form of treatment which seems to influence the result in well established cases. Secondary laparotomy, with thorough flushing and drainage, offers the best results, but even by these means comparatively few cases recover.

The administration of remedies to subdue the high temperature, the use of ice bag, cold coil, stimulants, etc., seem to have no influence whatever over the final result.

The subject of bowel obstruction has of late received a large share of attention, and as Dr. Hanks has placed the mortality from this cause at so high a figure, it is an all important one. The symptoms usually appear from the third day on, and consist primarily in the inability to obtain a movement of the bowels, very soon followed by vomiting, which soon becomes excessive, with pain and distention of the abdomen. These symptoms may soon be followed by sinking and collapse.

It is is very common for symptoms of obstruction to come on, which may look very grave for a time, but the patient recovers without an operation. It is for this reason principally that operations are as a rule put off until too late, until the symptoms of sinking appear, when an operation is useless. With advancement in our knowledge of diagnosis in bowel obstruction operative measures for relief will be resorted to earlier and with much better chances for success.

An instrument known as the rectal obturator, devised by my father, for giving forced enemas, may prove successful in overcoming the obstruction in many incipient cases, but the continued use of such means exhausts the patient, and makes the chances for success much less if an operation is eventually required.

Should the obstruction be due to paralysis of the intestines, in some cases their tonicity may be restored by massage of the abdomen continued with galvanism.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting March 23, 1892, President John B. Roberts in the Chair.

Dr. John S. Stewart read a paper entitled "The use of Gelatine Discs in the Eye." (See page 686.)

DISCUSSION.

Dr. Samuel D. Risley: I am very glad that Dr. Stewart has given us his experience in the use of the gelatine discs. I have used them but very little, but this limited experience has not afforded me sufficient encouragement to abandon the use of carefully prepared neutral solutions of the mydriatics. The discs in which the cocaine is combined with homatropine, I have found invariably cause severe irritation, as the cocaine solutions are likely to do, and that the attendant profuse lachrymation is liable to wash away the homatropine before absoption can take place. I have not noticed any gluing of the eye by the dissolved gelatine. The obvious intention in the use of the disc is to secure some rapid means of paralyzing the accommodation, for the purpose of correcting errors of refraction. It is possible that in a certain group of cases, without much retino-choroidal irritation, that this means may be sufficient, as was demonstrated with regard to the use of homatropine in 1881. But there is a much larger group of patients, with well-marked retino-choroidal disturbance the result of eye-strain, in which it is essential to have the therapeutic results of prolonged mydriasis. In these patients the more persistent mydriatics are needed. I have tried to administer these in the gelatine disc again and

again, but have always come back to the solution as more satisfactory.

Dr. Louis J. Lautenbach: The gelatine discs of which Dr. Stewart has spoken have been used by me for the past few months. It has seemed rather strange that the use of a one-fiftieth ($\frac{1}{50}$) of a grain of homatropine, or at most of two such applications, that the results obtained were practically the same as when from four to eight times this quantity were used in solution, even when the greatest precautions were taken as to its proper instillation, and yet I use them but rarely, relying almost invariably upon the watery solution. The cause for this difference in the quantity of homatropine used is, of course, due to the wasting of the mydriatic when used in solution.

As for the combination of homatropine and cocaine of which Dr. Stewart speaks, there is one very important fact to be mentioned, that is, that every once in a while after the use of this combination we will find a hazy cornea that is due to a disturbance of the corneal epithelium occasioned by the cocaine, and sometimes this disturbance of the epithelium will occur in a case where it will interfere completely with the determination of the refraction. It is almost impossible to determine the exact amount of astigmatism when the cornea is thus disturbed, the greatest interference being in cases of astigmatism of small amounts, and here we occasionally will be compelled to discharge our patient for the day without having obtained any satisfactory results, being compelled to examine the patient at some other time under the influence of this or some other mydriatic.

Dr. Edward Jackson: Some careful comparative tests convinced me that the gelatine discs containing homatropine and cocaine produced a somewhat greater effect on the accommodation than did a drop of the solution containing the same amount of the drugs. A single disc did not, however, in any case produce complete and satisfactory paralysis of the accommodation in a young person. Two discs commonly did.

With such discs, as after any use of cocaine for measuring refractions, one must remember the precaution of keeping the eyes closed to avoid drying of the corneal epithelium and consequent irregular astigmatism. My trial of the gelatine discs has not led me to adopt them in the place of solutions.

Dr. Chas. Hermon Thomas: Homatropine in solution of 1 to 40, dropped into the eye at intervals of five to ten minutes four or five times, is an effective means of completely paralyzing the accommodation. But these instillations should be made by the surgeon himself, and the refractive measurement should begin within a short time after the last instillation.

There is a little knack which I have been in the habit of resorting to for some years, which, I think, is of practical value. It consists in striking off a small drop from the pipette upon the edge of the upper lid, slightly separated from the globe, but without eversion. This manipulation favors the distribution of the alkaloid over the cornea, Used in this way, I have never seen conjunctival or ciliary irritation of any importance, certainly nothing to interfere with a satisfactory measurement.

The atropia discs of Savery and Moore, to which allusion has been made, were tested at Wills Hospital when I was a resident in 1865. The immediate effect of the application of these discs was found to be more disturbing to the patients than the solution, and their use was, therefore, soon discontinued.

Dr. L. Webster Fox: The use of medicated gelatine discs in ophthalmic work dates back for more than a decade of years. I have a variety of these discs in my possession which I brought with me from London in 1881. I still occasionally use them, and find them to answer as well as certain aqueous solutions of the same drug.

I had samples of the gelatine discs, described by Dr. Stewart, sent me by Wyeth Bros., which were made after the formula suggested by Dr. Casey Wood, *i. e.*, homatropine and cocaine in combination. I found that the use of this combination produced two distinct trains of symptoms in the eyes of the majority of my patients: First, great irritation to the conjunctiva and corneal epithelium; and second, on account of this corneal disturbance, the transparency of the cornea was lessened, and in consequence the visual acuity was modified. I had discs made containing homatropine alone, hoping thereby to lessen the corneal disturbance, but I must say that I get equally good results from aqueous solutions, and with much less conjunctival irritation and annoyance to patients. They are not without advantage, however, and in certain forms of iritis I use them, combining the drug daturine instead of atropia.

Dr. Geo. E. de Schweinitz read a paper on "Some Cases of Obstructive Disease of the Lachrymal Passages and the Associated Intra-Nasal Lesions." (see page 688.)

Dr. Edward Jackson: I have very little to add to this paper. We are not in a position to generalize widely on this subject

or determine how many cases, or what proportion of cases, belong to this group in from which the obstruction comes originally the nasal chambers. Certainly I have not studied enough of these cases to go further than simply consider individual instances and study the lessons they seem to teach. A case that comes now to my mind is one that was treated some years ago at the Polyclinic for lachrymal obstruction. He recovered, or at least got in such a good condition that he ceased to attend. Within a few months he returned to the clinic with a renewal of his epiphora, and on passing a probe I found no obstruction until the lower end of the duct was reached. There the obstruction was very noticeable, although no difficulty was experienced in passing the probe. He was referred to the nose and throat department, and there was found a cicatrix involving the lower end of the duct. Whether this cicatrix was connected with the former treatment, or whether it resulted from the original nasal lesion, I am not prepared to say. Its removal certainly removed the obstruction to the flow of tears.

I recall two cases in which the thickening of the mucous membrane at the opening of the duct into the nose was the sole cause of the epiphora. Probably in the great majority of cases of lachrymal obstruction the original obstruction has been seated at one end of the canal. I do not think that it is always, and perhaps not in the majority of cases, that the trouble begins at the lower end of the canal coming from the nasal chambers. Frequently it commences with the puncta. Some of the obstinate cases that have come to me with a history of slitting up of the canaliculi, and long-continued treatment with probes without permanent benefit, have shown a grave error in the position of the incision into the canaliculus. Instead of on the conjunctival surface, the cut has been made on the upper edge of the lid, so that the tears could not get into the passage until they ran over the edge of the lid. These cases are liable to a return of the acute trouble, for if the normal flow of the fluid through the lachrymal sac and duct be not sustained micrococci which enter find the conditions most favorable for free development and the setting up of pathological processes.

Dr. Samuel D. Risley: The facts that Dr. de Schweinitz has set forth in this admirably reported group of cases are of great practical importance, both to the ophthalmologist and those who treat the diseases of the naso-pharynx. The conditions so aptly described suggest many points of great importance. It recalls some of my experiences in the treatment of lachrymal disease.

I remember the case of a Mr. C., whom I had treated for a long time in 1879 for lachrymal retention unsuccessfully. There was no stricture of the duct other than that due to a more or less uniform thickening of the mucous membrane, but there was, nevertheless, more or less constant epiphora. Incidentally, he called my attention to some trouble with the nostril on the side of the affected tear-duct. I discovered a broad superficial ulcer underlying the anterior end of the inferior turbinated bone. This was speedily cured by a few applications, and his lachrymal trouble soon disappeared. This was the first inkling I had received of the important relation which might exist between certain cases of lachrymal disease and affections of the nasal passages. At that time, so far as I knew, literature was silent upon the subject. From that time to this it has been my uniform practice to carefully inspect the nose in every case of lachrymal disease.

Dr. de Schweinitz's paper is an admirable statement of facts, with which my own experience is strictly in accord in a large group of cases suffering from this very troublesome and persistent affection. These facts explain why so many cases of epiphora present no marked stricture of the lachrymal duct. I have also had experiences the counterpart of that related by Dr. Jackson, where the probe was passed freely until the nasal end of the duct was reached, and there, meeting with resistance, if forced roughly into the nose will cause bleeding from laceration of the inflamed and swollen mucous membrane, closing or blocking the nasal orifice of the canal.

Another practical bearing of these facts in ophthalmic surgery is, that since the lachrymal passages are liable to disease by extension upward from the nose, which furnishes such perfect conditions for the rapid development of micro-organisms, the nasal passages may become the source of infection for the eye itself. It suggests the necessity for great care in this direction, particularly before and after operation upon the eye. We may deluge the conjunctival sac with antiseptic lotions before opening the anterior chamber, bandage the eye, and imagine that all has been done for the safety of our patient, whereas the facts set forth this evening suggest the possibility of infection from the nose through the lachrymal duct. With this possibility in mind, I have of late years recognized the importance of washing out the lachrymal sac and nasal passages with bichloride of mer-

cury solution where I expect to bandage the eyes after operation.

If affections of the nasal mucous membrane are then the origin of a considerable group of cases of lachrymal disease, it is obviously unwise to treat the duct harshly by probing until after the nasal disease is excluded. The function of the lachrymal duct is not performed in the manner of a drain-pipe, but is rather a capillary tube, and its inflammations may often be cured by washing with suitable lotions. Probing is often necessary, but rarely with the idea of dilating the capillary tube into an open canal. In 1877 I urged that the proper function of the probe was to induce absorption of the products of inflammation in the thickened membrane lining the duct, rather than the rupture of a stricture or dilatation of the duct.

Dr. Alexander B. Randall: I do not think I can add anything to what has been said. I have not met with a great deal of lachrymal trouble in the three or four thousand cases seen at the Episcopal Hospital. I have met, in that number, with only thirty that required absolute lachrymal treatment. I recall a large number of cases where the nasal trouble seemed to be the cause of the affection, and where treatment directed solely to the nose has resulted most happily. In a large number of cases of children with watery eyes I have never, I believe, with one exception, used any other treatment than that to the nares and lower end of the duct, and have had no reason to regret the absence of other forms of treatment. I have always thought that the puncta, and the arrangements of the upper part of the lachrymal passage, had a decided physiological purpose, and that it was a great disadvantage to treat these parts by incision and probing if there was no absolute necessity for it. In directing attention to the primary incision and to the constitutional treatment of the case, my results have been most satisfactory with a minimum amount of necessity for surgical procedures directed to the upper part of the lachrymal passages.

Dr. Ralph W. Seiss: With regard to the nasal lesions found in these cases, in the instances that I have seen they have been almost altogether of two types. One is enlargement of the anterior nasal spine with ecchondroses of the septum and swelling of the mucous membrane; the other is atrophic and sclerotic changes. It is important to keep this in mind, as it has an important bearing upon the treatment. The galvano-cautery is an admirable agent in the treatment of nasal troubles, but it must be used with caution in these cases. I have seen seven or eight cases of lachrymal obstruction following the reckless use of this agent to the lower turbinated body. When I receive such a case for treatment I am more apt to use trichlor-acetic acid or a single crystal of chromic acid than the cautery.

Dr. L. Webster Fox: There was one point which was not discussed by Dr. de Schweinitz in his paper, and yet my observations have led me to believe that it plays a very important rôle in the causation of lachrymal disturbances, and that is, asymmetry of the face. A deviation from the middle line by the nasal bones or septum would perforce cause a modification of the calibre of the lachrymal canal on that side. Any irritating substance lodged in this constricted channel could not find easy escape, and in consequence inflammation develops which eventually would lead on to lachrymal abscess. Then, again, closure of both upper and lower openings of the canaliculi caused by chronic conjunctivitis or blepharitis, proves again that asymmetry must play a factor in these cases, for with both eyes afflicted more or less, but one side of the drainage canal is affected. In 1884 all cases of lachrymal obstruction applying to the eye department of the Germantown Hospital were referred to Dr. S. MacSmith for nasal examination. I was in hopes that we could trace all lachrymal disorders to disturbances in the nasal cavities, but we are doomed to disappointment. While a certain number of cases had undoubted nasal complications, yet in many the lesion was found on the side opposite to the epiphora or lachrymal abscess. In some few cases we found the applied treatment to the nasal cavity did give relief, but in the majority we found that you must apply treatment to the orbital end of the canal to obtain good results. Dr. de Schweinitz did not dwell upon the treatment of lachrymal disturbance, which I regret; for, after all, we desire to learn from each other the best means by which a cure may be brought about, or at least to alleviate our patients.

My experience has led me to adopt the larger Cawper probes, followed by the insertion of a silver tube. In certain forms of epiphora a simple dilatation of the mouths of canaliculi will alleviate the patient, or slitting up, as suggested by Mr. Bowman; but where you have a stricture or lachrymal abscess, or both, I adopt the radical treatment—dilatation to its fullest capacity. As regards the application of astringent washes,

I have never had much success from their use alone.

Dr. Charles Hermon Thomas: The paper which Dr. de Schweinitz has read is an interesting and valuable contribution to the traatment of lachrymal obstruction. It, and especially the discussion which has taken place, has strongly emphasized a phase of the subject on which I confess I have not laid much stress in my own experience, which has withal been a not unsuccessful one. For a good many years I have had such satisfaction in the treatment of these cases as to leave little to be desired. I do not doubt that many of these cases can be relieved from the nasal side, but I must believe that there are a number of cases which can hardly be treated successfully in this way, exclusively cases in which the irritation has been so long continued that it has resulted in what might be called organic stricture as distinct as stricture of the urethra. Such cases certainly demand local treatment at the point of obstruction.

It was in 1868 that Stilling made the announcement of the results obtained by the use of the knife which he devised for the purpose of cutting strictures of the lachrymal duct. I was impressed with the value of the method of treatment proposed by him, and also with the want of adaptation of the knife which Stilling figured for the purpose. It seemed to me that the stiff, conical blade was faulty. I therefore devised a knife with a blunt conical tip, with the edge so set as to cut in withdrawing only, and attached to a flexible shank so that it could be bent to conform to the shape of the bony canal, and yet be rigid enough to control the blade. By slitting the lower canaliculus and first passing some of the more delicate probes, especially those of Dr. Williams, of Boston, this knife may be slipped down and a free linear incision made. The stricture is then divided completely even to the bone, and a large leaden style is introduced and allowed to remain for a few days or weeks at most, being removed daily for a time, for the purpose of washing the passage with some antiseptic fluid. By this method I have had such success as seems to leave little to be desired, and can hardly think that the time has arrived to abandon that method altogether and turn these cases over to the rhinologist. Indeed, I do not now recall a single case in which I had difficulty from obstruction at the lower end after I had gotten a passage through. The facts brought out by Dr. de Schweinitz doubtless make it most desirable to have the nasal passages of patients suffering from epiphora examined, and any abnormalities found therein treated. It is my purpose to return to this subject in the near future, and to enter more into details as to the method of treatment here briefly sketched.

Dr. George M. Gould: I wish to go one step further that Dr. Thomas in emphasizing the importance of ophthalmological treatment as such. There can be no question as regards cases such as Dr. de Schweinitz has presented. When there is absolute impermeability of the nasal end of the duct, the treatment is, of course, outlined by the diagnosis. In the greater number of cases, however, there is not absolute obstruction of the duct, but simply a stenosis, an unhealthy congested condition of the lachrymal mucous membrane, the duct certainly being patent to some extent, but not enough to carry off the large excess of tears. The frequent use of probes has seemed to me not only not necessary but simply superfluous in these cases.

During the past year I employed a plan of treatment in such cases, which has been so successful that I shall outline it. It consists in slitting the punctum vertically downward toward the palpebral fold, in order to increase the size of the opening. Then canting the patient's head to one side, the corner of the eye is filled with an antiseptic astringent lotion. The duct should first be emptied by pressure, and then allowed to fill with this solution. This procedure of emptying and refilling the duct is repeated several times, and thus the antiseptic solution is brought in contact with canaliculus, sac, and duct by capillarity and pressure. I have had cases in which, after showing the patient the method once, he has afterward practised it himself and came back in a week perfectly cured. The method is simple and effective, and can be carried out at at home. I have often wondered in those cases where probing has been employed, whether it was the probe or the antiseptic lotion that had done the good.

In regard to slitting of the canaliculus, I may say that I do not do this at the beginning of the treatment. If there is narrowing of the puncta the fluid enters more readily if it this cut.

Dr. George Friebis: I should like to ask whether, in the experience of Dr. de Schweinitz, he has met with obstruction due to such causes as inflammation and enlargement of the caruncle. I have in mind one case (a male adult, past middle age), in which I paid little attention to the inflamed caruncle, and the case did not improve under the routine treatment. Upon recognizing the

inflammation of the caruncle as a possible cause, and treating it with astringents, I succeeded in curing the epiphora without further instrumental interference.

Dr. de Schweinitz: I have presented this series of cases simply for the purpose of classifying one of the many varieties of lachrymal obstruction. I beg Dr. Thomas will not think that I wish to transfer the treatment of lachrymal obstruction to my friends, the rhinologists, much as I value their aid in the management of some of these cases, and I heartily agree with Dr. Thomas and with Dr. Gould, that the ophthalmological treatment of lachrymal obstruction is of paramount importance. These cases illustrate merely certain failures in treatment when applied to the ducts alone, because there is obstruction either at the inferior end of the duct or from intra-nasal lesion. I have not intended this evening to include the large number of cases due to obstruction in the canaliculus from polypi, from tear-stones, from fungus, or to the cases of obstruction high up, or to those which result from conjunctivitis and from malposition of the punctum lachrymale. Dr. Fox's observation in regard to asymmetry of the face is an important one, and deserving of much study. In regard to the use of large probes, I might not find myself in accord with Dr. Fox. Abnormal position of the caruncle or its enlargement, as referred to by Dr. Friebis, is an interesting anomaly. You are all familiar with the cases reported by Von Graefe and by Horner. I have some knowledge of a similar case occurring in the practice of Dr. Wallace, of this city. Cases of this character, or others which have been brought up into discussion, have been purposely omitted in the paper of this evening. My idea was simply to show that certain examples exist, and they are not infrequent, which can be treated better with than without the aid of the rhinologist.

FLORES ROSARUM IN CHRONIC DIARRHEA.

Alexjewski recommends the flowers of the red rose as a remedy for the treatment of chronic diarrhea. It is a favorite house remedy for this trouble among the Russian people. A handful of the dried flowers is made into an infusion. Children up to 5 years take a tumbler of the infusion in the course of a day. Adults may take from two to three tumblerfuls. Its taste is agreeable, especially if some sugar be added. It has cured some obstinate cases of diarrhœa in less than a week.—*St. Petersburg Med., Wochenschrift.*

SELECTED FORMULÆ.

TONIC.

℞
Tinct. nucis vomicæ.....gtt. j
Acid. hydrochloric. dilut.....gtt. ij.
Extract. cascaræ fluid .....gtt ij.
Tinct. gentianæ comp.....gtt. v.
Aquæ .....ad f ℥ j.
M. To be given three times a day.

MILK SUBSTITUTE FOR INFANTS.

Dr. L. Rochester, M. D., has used with success the following, in cases when the mother's milk was insufficient in quantity, or when it was desired to wean the infant:

℞
Yolk of egg.....No 1.
Sugar of milk.....teaspoonfuls 6.
Filtered water.....oz. 7.
Dissolve the sugar of milk in the water and add gradually to the yolk of egg, stirring constantly.

This is fed perfectly cold, in small quantities at a time, for twelve hours, gradually increasing the amount and lengthening the intervals, until finally the full amount is given four times in the twenty-four hours.

RESORCIN IN SEA SICKNESS.

The following (*Lo Sperimentale*, No. 18 1891) is praised in sea sickness:

℞
Resorcin resubl.....dgms. 2–1.5.
Sacchar. lactis..... " 5.
Mix and divide into thirty powders. One powder every two hours.

HORSE BLISTER.

An extra strong one, which gives great satisfaction:

℞
Yellow wax.....ounces 3.
Lard..... " 4.
Corrosive sublimate.....drams 4.
Powd. cantharides.....ounces 2.
Oil of turpentine.....drams 4.
Barbadoes tar..... " 4.
Melt the wax and lard and stir in the other ingredients, first reducing the corrosive sublimate to impalpable powder.

—*Pharm. Rec.*

GOUT.

In *Hygeia* occurs the following:

℞
Collodion.....℥ i.
Ether sulph.....℥ i.
Acid salicyl.....ʒ i.
Morph. sulph.....gr. x.
S. Apply locally with a camel's hair-brush every hour

ANTI-NEURALGIC OINTMENT.

℞
Veratrin..... 0.03.
Morph. muriat..... 0.02.
Adipis..... 30.00.
M. Sig. The veratrine should first be dissolved in a little alcohol. Apply with friction.

FUNCTIONAL IMPOTENCE.

℞
Ext. cannabis Indic.....gr. v.
Ext nucis vomicæ..... " v.
Ext. damianæ..... " xx.
M. et ft. pil. no. xx. Sig. One pill after meals and at bedtime.

—*Med. Age.*

PALATABLE PREPARATION OF COD LIVER OIL.

Prof. Parvin recommended to the class the following formula, which he had found that children would take very readily:

℞ Olei morrhuæ..... f ʒ viij.
Olei gaultheriæ..... f ʒ j.
Calcii phosphatis..... gr. cclvj.
Pulv. accaciæ,
Sacchari albi..... āā ʒ ij.
Aquæ, q. s..... ad Oj.
M.

CHLORALAMID.

Galiana gives the following:

℞ Chloralamid..... gr. xxx.
Dilute hydrochloric acid..... gtt. v.
Distilled water..... ʒ ii.
Syrup..... ʒ ii.
S. For two doses.

℞ Chloralamid..... gr. xv.
Infusion of tea.
Sugar āā enough to make a sweet solution.
S. At a dose.

—*Médicine Moderne.*

LEUCORRHŒA.

Prof. C. Braun, of Vienna, recommends in leucorrhœa, associated with chlorosis, the following:

℞ Ferri sulph. cryst.,
Potassii carbonic. et tartara..... āā ʒ j ¼.
Extr. et pulv. r. gentianæ q. s. ut
fiant pil. No. 60.
Sig. Two pills, morning, noon and evening.

If the leucorrhœa be bloody, then:

℞ Ferri sulph. cryst.,
Potassii hydrocarbon..... āā ʒ j.
Ergotin pur..... gr. xxiij.
Extr. et pulv. r. liqueritiæ, āā q. s,
ut f. pil. No. 50.
Sig. Two or three pills, morning, noon and evening.

If constipation be present, then:

℞ Ferri sulph. cryst.,
Potassii hydrocarbon..... āā ʒ j.
Aloes lucid..... gr. xxx.
Sig. A teaspoonful, morning, noon and evening.

Or:

℞ Ferri oxydat. dialyzat..... ʒj ¼.
Aq. f. d..... f ʒ iv.
Syrup. rub. idæi..... f ʒ vj.
Sig. A teaspoonful, morning, noon and evening.

These last two formulæ are well borne by the stomach.

For the relief of pain the following prescription is invaluable. It was originally intended for the spasmodic colic of adults, but I have known it to be of benefit in so many other affections (angina pectoris, asthmatic paroxysms, etc.,) that under no circumstances would I like to be deprived of the formula. Of course, it is most useful in troubles into which a convulsive element enters:

℞ Spts. chloroformi..... ʒ iij.
Tr. opii camph..... ʒ vj.
Tr. cardamomi comp. q. s..... ʒ iij.
M. Sig. ʒ ss pro re nata.

—*Ex.*

ACUTE BRONCHITIS.

The following (*The Prescription*, No. 1, 1892) is praised:

℞ Vin. ipecacuanhæ..... fl. ʒ ij.
Liq potass. citrat..... ʒ iv.
Tinct. opii camphorat.,
Syrup acaciæ..... āā fl. ʒ j.
One teaspoonful three times a day in an ordinary case of bronchitis.

ENDOMETRITIS.

Dr. Terrier (Paris) prescribes the following:

℞ Pulv. iodoform..... ʒ jiss.
Gum tragacanth..... gr viii.
Gl cerin., aquæ distillat., ana q. s.
This suffices to make ten pastilles.
Sig. Insert into the uterus and hold in place by a tampon.

—*Journ. de Med. de Paris*, No. 30, 1890.

FORMULA FOR THE ADMINISTRATION OF QUININE TO CHILDREN.

Dr. Lutz (*Gazzetta degli Ospitali*, No. 86, 1891) proposes the following:

℞ Sulphate of quinine..... cgms. 50.
Dilute sulphuric acid (1 per cent.)... " 50.
Essence of peppermint..... gtts. 5.
Saturated solution of saccharine..... gms. 10.
Water..... " 90.

CARDIAC DILATATION.

For cardiac dilatation, with slight congestion of the lungs, due to rheumatism, in a man aged thirty-seven years, Prof. Da Costa gave the following treatment:

℞ Tinct. digitalis..... gtt. x.
Tinct capsici..... gtt. j.
Tinct. cardamom..... f ʒ j.
M. Sig. Three times a day.

And two or three times a week give calomel, gr. j, in the evening, followed by a saline cathartic in the morning. The diet is to be chiefly of meat, with the use of a moderate amount of alcoholic liquors.—*Ex.*

INCONTINENCE OF URINE.

For incontinence of urine in children, due to exposure to cold, Prof. Hare recommends the following treatment:

Where the urine is high-colored and concentrated, and the child has fever, give—

℞ Tinct. aconit..... gtt. xij to xxiv.
Spirit ætheris nitrosi..... f ʒ ij to iv.
Liq. potass. citratis,..... ad f ʒ vj.
M. Sig. ʒ ii every three hours.

After the urine has become more dilute, belladonna can be given with advantage, to allay the irritation and spasms of the bladder.

Or when the incontinence is due to paralysis of the bladder, give—

℞ Extract. nucis vomicæ..... gr. ij.
Acid arseniosi..... gr. ⅓.
M. Fiant pil. xx. Sig. One pill three times a day.

—*Coll. and Clin. Record.*

THE

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LEADING ARTICLE.

HYDRASTINE IN UTERINE HÆMORRHAGES.

Whenever a new remedy is introduced into therapeutics, says a recent German writer, the profession of to-day is prone to regard it with the utmost skepticism. This may be true perhaps of the naturally pessimistic, or rather, cautious German physician, but it surely cannot be said of the average practitioner in this country.

To be sure, within the last ten years, medical journals and books have been flooded with a list of remedies of vaunted specific efficacy, the majority of which have faded from sight under the critical light of clinical experience and scientific investigation, and it would be well, perhaps, and just, did a more pessimistic tendency prevail in the profession on this side of the Atlantic. Nevertheless, many valuable remedies have been rejected and allowed to fall into disuse when only half tried, and a few initial failures, due, perhaps, to faulty method of administration rather than an inefficacy of the drug, have led to a wholesale condemnation of what might prove most valuable if properly used.

This seems to have been the fate of hydrastine, a drug which was first recommended in uterine hæmorrhages some two years ago by Falk. Although Falk at that time reported an improvement or cure in 84.6 per cent. of the cases in which he had tried the remedy, no one has since endeavored to follow up this line of research to prove or disprove the value of the drug, and yet without doubt many practitioners have seen cases of uterine hæmorrhage where the usual remedies, such as ergot, hydrastis, and others, have left him entirely in the lurch.

Before conducting experiments upon the human organism, Falk made a most careful series of experiments upon animals in order to determine both the exact action of the drug and the possible effect its exhibition would exert upon the general health of the organism. He found it entirely without ill effects. The results of these experiments

were as follows: Hydrastine is not a cardiac poison, it acts as a vascular contractor in animals, probably through an excitation of the vaso-motor centres, but chiefly by a direct action upon the blood-vessels themselves. In consequence of this action there is an increased blood-pressure. This at first occurs periodically, and is very marked, lasting and uncoupled by any period of relaxation. The action of hydrastine is entirely confined to the circulation, and unaccompanied by any unpleasant action. It was particularly observed that no symptoms of irritation of the spinal cord were manifest, and that the heart's action was influenced favorably.

These results obtained by experiment upon animals seemed to justify Falk in testing it clinically, and he did so, with remarkable success.

The subject, dropped for so long, has been taken up by Dr. Karl Abel, of Berlin, who publishes the results of his clinical experiences with hydrastine in uterine hæmorrhages in the *Berliner klinische Wochenschrift*, for Jan. 18, 1892. He has used the drug in a very large number of cases, and with remarkable success.

It may be hardly necessary to state that hydrastine was not used in such cases of internal hæmorrhages as result from a retention of placental remains, the presence of polypi, carcinoma, or other foreign growths. In such cases only a radical removal of the cause can efficiently check the hæmorrhage. Again, in such cases where heart failure was looked upon as the cause of the hæmorrhage, hydrastine was not given. In these cases also, the original cause was primarily treated.

The remedy was tested in cases where an objective anatomical condition existed, and also in cases in which such a condition was absent.

To this first-named category belong primary hæmorrhages in cases of endometritis, metritis, and myoma, as well as secondary hæmorrhages in diseases of the ovaries and tubes, such as parametritis, cysts of the tubes, and tubo-ovarian tumors. To the second category belong the menorrhagias and metrorrhagias, in which cases no objective condition can be ascribed as a cause of the hæmorrhage, which can usually be designated as ovarian or congestive hæmorrhages. It is especially in these last named cases in which the use of hydrastine is followed by the best results.

Hydrastine should always be given hypodermatically, as the results obtained when given per os are far from satisfactory. The injections should be made on the right or left side of the lower portion of the abdomen. A ten per cent. aqueous solution of the nitrate of hydrastine should be used, and of this from one-half to one gramme injected at at a dose. The patients will frequently complain of a burning pain at the seat of the injection, but this usually lasts but a short time, yet if severe can be relieved by cold applications. The day after the injection, in the majority of cases, the seat of the puncture will be found to have assumed a dark blue color, about the size of a half dollar, and in one case Abel noted that this discoloration extended over the entire abdomen. The discoloration, however, gradually disappears, but the seat of the puncture is painful upon pressure for quite a long time. No abscess was ever observed.

The number of injections necessary depends, naturally, upon the nature and severity of the case. If the case be one of ovarian hæmorrhage which merely takes the form of an intensified and prolonged menstruation recurring every four weeks, Abel usually gave one injection of half a gramme of the above named solution during the week before the appearance of menstruation, and during the period daily injections of one gramme. If this treatment gave rise to an improvement, then the injections would only be repeated once a week until the next period.

Almost without exception after two or three months of the above treatment the periods would become normal and remain so. If occasionally there was a slight relapse, a single injection given during the course of the period was sufficient to cause an almost immediate cessation of the hæmorrhage.

If these congestive hæmorrhages do not assume the regular type of the menstrual

periods, but occur at irregular times, varying from two to three weeks, the treatment must be a more energetic one.

Under the circumstances Abel injected one gramme of the hydrastine solution two to four times a week, and during menstruation one gramme daily. Usually these measures resulted in a marked improvement when the first period occurred, since they usually delayed this for four or five days. If the treatment was continued the second period usually did not occur until after a normal lapse of time, or four weeks, would last but five days, and would be accompanied by but slight loss of blood. Simultaneously the severe dysmenorrhœic pains would disappear.

In cases of endometritis we are either dealing with a condition of glandular hyperplasia or fungus endometritis. Hydrastine was used successfully in both of these conditions. The drug was given in doses of one gramme; two injections a week being administered between the menstrual periods, and one injection a day during the period. In several of the cases in which the drug was tried, the curette had previously been used. A continued treatment, however, resulted in bringing about a normal condition, in so far as menstruation was concerned. In the cases of glandular hyperplasia, the periods between the flow will be rendered of normal duration, yet the flow may frequently remain copious for a long period, and in such cases one or two injections during the course of menstruation will render the amount also normal.

In one case of metritis with profuse menorrhagia, Abel gave one injection a week, and after the sixth injection the patient was completely and permanently cured. Menstruation which had in this case lasted two weeks at once became normal, lasting only four or five days. In addition to this the womb gradually became reduced to its normal size.

In uterine myoma the drug does not seem to exert any more potent influence than ergotine.

We now finally arrive at a consideration of the secondary uterine hæmorrhages, caused by disease of the uterine adnexa, and principally by pyosalpinx and chronic parametritis. In the last named disease a decided improvement was seen to follow the use of hydrastine, while in pyosalpinx the action of the drug seemed of rather an uncertain character. In one case of double pyosalpinx, when the patient was never free from hæmorrhages for longer than a week, daily injections of hydrastine at first caused a rapid improvement, the patient being free from hæmorrhages for two weeks at a time; but later the drug seemed to lose its effect, and the ovaries were finally removed. In another case of left-sided pyosalpinx, the action of hydrastine was remarkably successful, a complete and lasting cure being obtained.

Finally, the drug has been given in cases of hæmorrhage occurring during gestation with good results, and the several writers on the subject agree that its use will in no way tend to cause an abortion.

In conclusion, if we sum up the experiences of Falk, Abel, and others, it appears that in the subcutaneous administration of hydrastine we have a remedy of undoubted efficacy, and of greater certainty in action than any other in cases of uterine hæmorrhages; and, moreover, that in many cases its judicious use may result in a complete cure of the morbid process. By its use we may undoubtedly be frequently spared the not always easy operation of curetting, and in doing so surely avoid a possible danger to the patient. The treatment is a conservative one, and can not infrequently remove the necessity of a laparotomy for the removal of the ovaries and tubes. As such it commands our careful consideration.

DISINFECTANT INJECTION IN CANCER OF THE UTERUS.

Dr. Cheron makes use of this formula in cases of uterine cancer:

℞

Natr. salicyl	ʒ jss.
Acid salicyl	ℳ xv.
Tinct. eucalypt	f ʒ jiss.
Acet. vin	f ʒ xvj

Sig. Inject per vaginam one to two teaspoonfuls to a pint of warm water.

—*Deutsche medicinische Wochenschrift*, 5, 1890.

PERISCOPE.

THERAPEUTICS.

JAPANESE MASSAGE.

With the exception of some musicians, and a few who may be supported privately by relatives or who are in asylums, the blind of both sexes in this country are engaged in one calling, and have a complete monopoly of that profession. This calling, in the vernacular, is denominated *amma*, and is usually translated "shampooing;" while the operator himself goes by the name *amma san* ("Mr. Shampooer"). This operation, as will be seen later, is in reality a kind of massage treatment, much employed by the natives when they are tired or a little indisposed. It is especially "recommended to tired pedestrians, and to persons suffering from lumbago, rheumatism and other pains and aches." It is, among the lower classes, a very common remedy for colds and headaches.—*Dietetic Gaz.*

PREVENTION OF COCAINE POISONING.

Accidents from the use of cocaine have become so numerous that it is looked upon by some as too risky a drug to be administered. This is a pity, since with caution it may certainly be used without fear.

Patients should be prepared by giving them a drop of a 1 per cent. alcoholic solution of trinitrine a minute before administering the cocaine, repeating the dose at intervals if the pulse be not affected and no pain or fulness in the temporal region be felt. The trinitrine acts almost as rapidly and continues to affect the vaso-dilators for upwards of half an hour longer than nitrite of amyl, which Professor Lepine has proposed, but which, on account of its fleeting action, has failed to gratify the hopes to which it gave rise.

Professor Lepine has pointed out the importance of paying attention to the type of patient. The nervous are to be encouraged and calmed, the anæmic made to lie down before administering the drug, for thus, as Dujardin-Beaumetz points out, cerebral anæmia is avoided. Dr. Lepine's statistics show that in the neighborhood of the face it is unsafe to inject hypodermically more than 2 centigrammes (one-third of a grain) at a time, and not more than from 4 to 5 centigrammes should be allowed to come in contact with a mucous surface. By taking these precautions accident is guarded against.—Dr. G. Cockburn Smith, in the *Brit. Med. Jour.*

STRONTIUM SALTS IN MEDICINE.

A discussion that has arisen in France out of the use of strontium compounds in the plastering of wines has turned attention to the physiological action of strontium salts. As a result, several communications on the subject have been presented almost simultaneously to the Société de Thérapeutique (*Rev, Thérap.*, November 15th, p. 604). In one, M. Ferré states that he has obtained with *strontium bromide* the same advantages as with the alkaline bromides in the treatment of epileptics, whilst it was better tolerated by the stomach. In a second, M. Sée stated that two to five gm. of bromide, dissolved in water, and taken in three doses in the course of the day, had been very useful in relieving dyspepsia, gastralgic pains, cardiac complaints, and Bright's disease. *Iodide of strontium* had also, in his hands, proved useful in heart disease. In a third, M. Paul reported that he had found the administration of a solution of strontium in lactic acid to cause the rapid and complete disappearance of albumen from the urine. In a subsequent communication, M. Dujardin-Beaumetz confirmed M. Paul's statements to the extent that in his experience the administration of the *lactate* had always promptly reduced the albumen by one-half. This result he appeared disposed to attribute primarily to the favorable effect of the salt on the digestive organs, which reduced the production of toxines to the minimum. M. Paul uses a solution of 50 gm. of "lactostrontiane" in 250 gm of water, the dose being a teaspoonful night and morning. —*Pharm. Journ.*

CURE OF RECURRENT ERYSIPELAS.

Dr. Lavrand relates the case of a woman who had repeated attacks of an erysipelas-like erythema, beginning at the sides of the nose, sometimes as often as twice in the month, but usually not proving severe. She suffered from chronic pharyngeal catarrh as well as hypertrophy of the middle and lower turbinated bones. Repeated medicinal as well as galvano-caustic treatment of the nose, which was looked upon as the port of entry of the infection, was without result, and the attacks continued. Cure was effected, however, by treatment of the naso-pharynx, and epecially by the removal of adenoid vegetations found there, and it was thought that the tissues made vulnerable in this location offered the real entrance for the erysipelas cocci.—*Deutsche Med. Zeitung*, No. 5, 1892.

A HAPPY APPLICATION OF INSUFFLATION.

Renault (*Le Progrès Médical*, 1891, No. 61, p. 475) records an instructive case occurring under his notice at the Maternité. A child about a month old had had a cough for three days, and at the end of that time was brought to the notice of the author. Well-marked broncho-pneumonia was found, with a temperature of 101⅘° F. Dyspnœa continued to increase until the following day, when the nurse in the ward was called to find the child in a state of almost complete asphyxia. The skin was cold, the face cyanosed, the lips blue, and the respiratory movements very shallow and failing. Without hope of reviving it, but rather that the mother, who was present, should not think the child was permitted to die without an effort at relief, the nurse took up the insufflateur, which was in daily use in the wards for resuscitating asphyxiated newborn infants, and applied it to the mouth of the dying child. After an occasional interruption in the operation during a period of five minutes, the bluish color of the face and lips began to gave way to a rosy tint. This unhoped-for success gave renewed encouragement to her efforts, and after a quarter-hour's work the child had so far been resuscitated as to permit of more active treatment with mustard bath, dry cups, and diffusible stimulants. Another attack of asphyxia was treated successfully in the same way, after which the case went on to an uninterrupted recovery.

THE USES OF STRONTIUM BROMIDE.

By experimental doses of salts of strontium in cases of chronic renal and cardiac diseases some good was found to be done, and this led M. Sée to make a careful study of the use of strontium bromide iu thirty-two cases of dyspepsia. He gave from 30 to 45 grs. a day, in three doses along with the meals; and those cases in which there was excess of hydrochloric acid rapidly improved and developed much less gaseous products. In six other cases, where there was vomiting with deficiency of acid, there was complete cessation of the sickness. Strontium lactate did not produce any good effect. Strontium bromide, as well as calcium bromide, was found of use by M. Sée in epilepsy, and this was confirmed by M. Féré, who found in fact that, owing to its easy agreement with the stomach, it was sometimes advisable to give strontium bromide in preference to the potassium salt.—(*Le Proyrès Méd.*, vol. ii., p. 311, 1891.)

ANTISEPTIC AND SEDATIVE TREATMENT OF HÆMORRHOIDS.

This treatment has been successfully used by Dr. Kassobudski for external and also internal hæmorrhoids. (1) For internal hæmorrhoids: chrysarobin 1 gm., iodoform 30 cg., extr. belladonna 50 cg., cacao butter 20 cg.; to be made into six suppositories. One suppository to be used a day. (2) For external hæmorrhoids: a lotion of corrosive sublimate (1 : 1,000) or phenol (1 : 50) is used several times a day, succeeding which chrysarobin salve is applied, made of the same ingredients as the above suppositories, except that cacao butter is replaced by vaselin 30 gm.—*Revue de Thèrapeut.*, 1891, p. 49.

CARDIAC TONICS.

In a very instructive lecture on the cardiac tonics, G. Sée (*Médicine Moderne*, July 2, 1891) arrives at the following conclusions:

Digitalin increases the diastolic elasticity of the heart, thus increasing its capacity and allowing more complete filling of the arteries. The systole is not exaggerated, and the vessels are not always contracted, so that digitalin regulates the action of the heart without strengthening the organ. It is best given, if a large dose, (half a milligramme, one-seventy-fifth of a grain) be indicated, twice on the first day, followed in the following two oa three days by small doses to sustain the effect. Even then one is obliged to wait before the desired result is obtained, as the drug is but slightly soluble, and owing to the feeble condition of the patient absorption may be slow.

Iodide of potash acts similarly; it dilates the vessels still more, and considerably facilitates the peripheral circulation as well as that in the nutrient vessels of the heart. From the latter point of view it is a cardiac nutrient; from the former, it regulates its action, especially if there be pulmonary congestion, dyspnœa or asthma. One gramme (fifteen grains), should be given in milk or beer three times a day with meals for five days out of seven, and indefinitely continued.

Strophanthin is an energetic vaso-constrictor; it increases the force of the heart only indirectly, and its effect is transitory. It acts promptly and does not accumulate, one-fourth of a milligramme should be prescribed, either in tincture or pill form.

Spartein and convallamarin are often indispensable auxiliaries of the preceding drugs. The action of the first is almost instantaneous, but its effect is soon lost, so that it should

be given two or three times daily; two to four grains may be given in twenty-four hours. Convallamarin has no cumulative action, and five to eight grains may be given daily.

Caffein is especially valuable as a diuretic in dropsy of cardiac organ; it is also a general excitant, but not especially of the heart.

Lactose, like caffein, is a renal diuretic and has no action on the heart or vessels.

ON THE EMPLOYMENT OF DRYING LINIMENT IN THE TREATMENT OF SKIN DISEASES.

The use of medicated gelatines, as recommended many years ago by Pick, is admittedly attended with some discomforts, and is not altogether satisfactory. The gelatine has to be warmed up every time it is employed, to be immediately and very uniformly applied to the part—a procedure of some difficulty and sometimes involving not a little pain—and the rapidity with which it dries reduces the possibility of absorption of any drug incorporated in it to a minimum, as the film is not in very intimate contact with the skin. Pick now recommends gum tragacanth as a basis, substance which, in contrast to gum arabic, does not dissolve in water, but melts down into a sort of a syrupy mass, which may be very easily smeared over the skin, and which on drying leaves a thin, delicate and colorless film. He considers the following proportions the most generally useful:—

Gum tragacanth	5 parts
Glycerine	2 "
Distilled water	100 "

and denominates the basis thus abtained a *linimentum exsiccans*. It may be prepared with cold or hot water, but preferably with the latter, as a thoroughly antiseptic preparation is thus obtained, which is not only easily applied, but as easily washed off with a little tepid water. Its application gives rise to a sensation of coolness which is specially noticeable and gratifying when it is used to congested or inflamed skin. Its advantages over fats is that it is not greasy, does not spoil the clothes, does not disfigure, and no further dressing over it is necessary. Remedies which are soluble in water can be incorporated in the liniment by being first dissolved in water used for its preparation. Substances insoluble in water can be rubbed into the basis in a fine state of division with very satisfactory results. Oily substances only alter its consistence and retard its drying to a perceptible degree when in very large proportions. Ichthyol, styrax, Peru balsam, oleum fagi, cadini, rusci, etc., may thus be used from 5 to 10 per cent. Insoluble substances, such as chrysarobin, zinc oxide, white precipitate, red and yellow oxide of mercury, iodoform, iodol, salicylic acid, etc., give the consistence of paste to the preparation if in large proportions, but without altering its characters, except perhaps by increasing the rapidity with which it dries up, and thus enhancing its value. The preparations thus obtained are very stable, and produce no constitutional symptoms, even when their local action is energetic. An advantage of these drying liniments claimed by Pick is that they are easily applied, and may be used in out-patient practice.—(*Vierteljahr, J. Derm.*, June, 1891.

THE VALUE OF BICHLORIDE OF MERCURY IN THE TREATMENT OF URETHRITIS.

Brewer (*Internat. Jour. of Surg.*) reiterates his confidence in the efficacy of bichloride of mercury in the treatment of urethritis. His method was as follows: At the first visit the patient was instructed in the proper use of a syringe, and was given a large amount of a solution of bichloride of mercury, varying in strength from 1 : 16,000 to 1 : 50,000, according to the sensitiveness of his urethra and the stage of the disease. This he was instructed to use twice daily, by taking ten injections in the morning and ten at night, holding each one in the urethra one minute to imitate as nearly as possible the result of irrigation. The patient was seen three times a week. As soon as the discharge lost its purulent character, bichloride was suspended and a mild astringent was substituted, preferably bismuth suspended in water. In the fifty-five cases treated in this way, five were not benefited after an average employment of the method for seven days. In the remaining fifty cases, the average length of time necessary to effect a change in the discharge from pus to thin watery secretion was a fraction over eight days. The discharge entirely disappeared on an average of twenty-one days. Epididymitis occurred in three of these cases, and posterior urethritis was developed in two. The reporter very fairly states that these statistics are of little value from a scientific point of view, since the cessation of the discharge can by no means be considered as an index that the disease has been cured. He offers his conclusions not so much on the basis of these cases as upon a very large personal experience, and states positively that the judicious use of bicloride of mercury in cases

of acute gonorrhœal urethritis is attended with better results in subduing the painful and disagreeable features of the disease than any other agent. The recovery is more rapid and permanent, and the frequency of inflammatory complications is very greatly reduced. —*Therap. Gaz.*

POTASSIUM PERMANGANATE AS AN ANTIDOTE TO PHOSPHORUS.

At a meeting of the Royal Society of Physicians of Buda-Pest, Bokai (*Deutsche medicin. Wochenschrift*, No. 47, p. 1294), as a result of chemical investigation and experiments upon animals, commended from one-fifth to one-third of one per cent. solutions of potassium permanganate as an antidote in cases of poisoning by phosphorus. Phosphorus in the presence of potassium permanganate is converted into innocuous orthophosphoric acid in the stomach, with the development of manganese chloride. Poisoned dogs thus treated were saved; untreated dogs died. Even one per cent. solutions of potassium permanganate exerted no injurious effect upon the coats of the stomach.

SALINE INFUSION FOR SEVERE HÆMORRHAGE.

Dr. R. H. M. Dawbarn, of New York, has devised a novel method of saline infusion, which he has employed with marked success in a case of severe uterine hæmorrhage, and which commends itself on account of its simplicity: The fluid injected is a solution of table salt in water that has been boiled, in the proportion of a heaped teaspoonful of the salt to a quart of warm water. All the appliances needed are a rubber bulb syringe, an ordinary soft rubber catheter or a small rubber drainage tube, and an ordinary hypodermic needle (a large size preferred). To avoid a cutting operation, with the searching for a small collapsed vein, the tying of the cannula, etc., Dr. Dawbarn makes the injection into the femoral artery, which can almost to a certainty be felt beating just above Poupart's ligament, even if the patient be pulseless at the wrist. The technique of the proceeding is as follows: Take the needle—not as yet attached to the catheter—and push it directly into this artery, going slowly, until bright-red blood is seen to well up from within the needle. As soon as the arterial blood is seen in the needle, slip over its base the catheter—already attached to the syringe, the nozzle of which has entered it at the eye, and both being filled with the salt-water, as hot as the hand can tolerate—and tie the thread tightly about the catheter, securing it to the base of the needle. Now, holding the needle in place firmly and steadily, pump the fluid directly into the arterial current. To avoid possible pumping of air by an old or leaky syringe, make an abundance of salt-water, and keep the entire syringe, with the hand working it, beneath the surface. In the case reported a full pint of the hot salt-water was thrown into the artery, taking nearly half an hour. After an interval of half an hour a second full pint was injected into the connective tissue of the thigh, as the circulation was then sufficiently strong to absorb the fluid into itself. Other restorative measures (hot applications, hot beef tea enema, small hypodermics of strychnine, etc.), were also employed.—*Internat. Jour. Surg.*

ANTIGALACTAGOGUE ACTION OF ANTIPYRIN.

Guibert has found that the lacteal secretion can be completely suppressed in from two to six days by antipyrin in daily doses of thirty grains or more, given in divided portions every two hours. After thus employing antipyrin in nineteen cases, it is regarded as harmless and of real service where it is desired to suppress the milk secretion.—*Le Practicien.*

EFFECTS OF SULFONAL.

In the *Journal of Mental Science* Dr. Carlyle Johnstone records his observations on the effects of sulfonal on fifty patients suffering from various kinds of mental disorders, including general paralysis, melancholia, and mania. His experiences with this drug point to the conclusions that in properly regulated doses it is an efficient hypnotic, and compared with that of other hypnotics, its action is fairly certain and constant. The sleep produced by it is natural and undisturbed by dreams; it has no injurious effect upon the appetite, circulation, respiration, or temperature, and the general health does not suffer under its use. After a time, the dose may be reduced or it may be discontinued, and the patient still continue to sleep well. Dr. Johnstone also found that it has a distinct sedative action in mental excitement and distress, and could be employed with great benefit in cases of insanity, especially such as are of recent or acute character. Its complete tastelessness also is recommended in such cases, allowing its combination of food or in milk in such a way as to escape

the notice of the patient. The chief drawbacks were found to be its slowness of action, and often the persistence of its saporific effect during the succeeding day, together with, at times, confusion, giddiness, and fatigue. After repeated doses, a dreary confusion was noticeable, and subsequently a slight weariness and fatigue, followed in a few days by enfeebleness and shakiness of motion, but nothing occurred which could be called an alarming symptom. As a rule, indeed, the mental condition improved, the excitement, irritability, and motor restlessness being diminished and the wretchedness dispelled. It will thus be seen that the writer's conclusions are in accord with the majority of those already published, and that while regarding sulfonal as by no means a perfect hypnotic, he is inclined to give it a very important place in the treatment of sleeplessness and restlessness generally. The best doses, he found to be between thirty and forty grains, and it should be given just before the patient lies down. The freedom of the drug from taste or smell, as has been said, is one of its advantages and renders its administration easy.—*Lancet.*

PHENACETINE AS AN ANTIPYRETIC.

The unexampled success of phenacetine, as a certain and safe antipyretic, has given rise to many clinical comparisons of that medicament with other febrifuges, but the results have served to increase the reputation of phenacetine. Professor Eickhorst, of Zurich, recently said (*Schweizer Aertse*, No. 5, 1892), "I have no great partiality for new antipyretics, for in my opinion fever should only be combated in emergency cases, and for this purpose some of the known antipyretics are amply sufficient. But if I should happen to find an antifebrile treatment necessary, I should certainly make use of phenacetine."

IODOFORM SPONGES.

Rettenheimer states that iodoform sponges may be prepared in the following manner: Suitable soft sponges are thoroughly boiled in water, then allowed to remain for five days in a five per cent solution of hydrochloric acid, and at the end of that time thoroughly washed in pure water to remove all acid, and finally dried. They are then placed in a 7.5 per cent. ethereal solution of iodoform and allowed to remain there until the ether evaporates.—*Pharmaceutical Record*, December 17, 1891.

MEDICINE.

INFLUENZA AND NEUROSES.

The following, according to Dr. George H. Savage, are some of the unpleasant things that influenza can do: Influenza, like other fevers, may set up psychopathy. Insanity may come on at varions periods of the disease. It may start any form of insanity. No specific symptoms result from influenza. The rôle of the influenza varies in the production of the insanity. It may be the predisposing or the exciting cause. In all cases there is some acquired or inherited predisposition. The insanity follows from altered brain-nutrition, possibly toxic. Onset of insanity often sudden and bearing no relationship to the severity of the influenza. The curability depends on the general rather than special conditions. The insane are less disposed to take it than the sane. Rarely it has cured psychoses. The insane may have mental remission during the influenza. There is no special indication in the treatment. Influenza may lead to crimes and medico-legal issues.—*Med. Press.*

PERI-URETHRAL ABSCESS IN CASES OF GONORRHŒA.

H. Christiani, of Geneva, reports a case (*Rev. Méd. de la Suisse Rom.*, October, 1891) in support of the view held by Pellizzari and others that Neisser's gonococcus, the micro-organism of gonorrhœa, is endowed with pyogenic properties. In peri-urethral abscesses, which are not infrequently met with after gonorrhœa, the ordinary bacteria of suppuration are often observed with or without gonococci. According to many observers, gonococci are never found alone in the pus of a peri-urethral abscess, but are always associated with other micro-organisms, especially the staphylococcus pyogenes, and consequently, this form of abscess is due to the presence of ordinary pyogenic microbes, and not to that of the gonococcus, which is simply accidental. Pellizzari, however, on careful examination of the purulent contents of three peri-urethral abscesses, found only gonococci, and none of the recognized pyogenic microbes. The absence of such microbes and the identity of the organisms observed in the pus with the gonococcus of Neisser were proved by the failure to effect any cultivations on gelatine and other nutritive media. The gonococcus, it is well known, cannot be developed in gelatine, whilst, on the other hand, the ordinary pyogenic organisms are readily and quickly cultivated in

this medium. The case reported by Christiani, taken together with those of Pellizzari, favor the conclusion that in some cases of peri-urethral abscesses of gonorrhœal origin, gonococci are the primary agents of suppuration, and are not associated with other pyogenic micro-organisms until a late period, and after the formation of the abscess.—*Brit. Med. Jour.*

EPILEPSY FOLLOWING REVACCINATION.

J. Althaus (*Archives de Neurologie*) cites a case in which revaccination in a healthy youth of 19 caused attacks of true epilepsy. Great stress is laid upon the fact that the family and personal histories of the patient were excellent. In the commencement of June, 1888, he was revaccinated, having been previously successfully vaccinated when a baby. A week later there occurred a pustular eruption, severe lymphagitis and swelling in the right knee and tibiotarsal articulation. Emaciation set in, and at the end of the month he had his first attack of epilepsy. These seizures were attended with all the classical symptoms of that disease, and were of very frequent occurrence. In the month of May, 1889, he remained two months in Regent's Park Hospital, at London, where the attacks were first lessened and finally cured by use of bromide potassium, arsenic and hyoscyamine. Althaus has followed the subsequent history of this patient, and states that there has been no return of the attacks.

EXAMINATION OF SPUTUM.

Gabritschewsky (*Deutsche med. Woch.*, October 22d, 1891) advocates the examination of sputum in sections. Ad. Schmidt is stated to have been the first to employ this method, by means of which he was enabled to discover certain structures not to be seen is preparations of sputum made in the usual way. Cover-glass preparations are, in fact, insufficient, since many cells are destroyed by the process involved, and the histological nature of many others cannot be determined without preliminary fixation. As fixing and hardening fluids the author employed alcohol, Müller's fluid, Flemming's solution, picric acid, and sublimate in concentrated form. Each of these reagents is reliable, with exception of Müller's fluid. The freshly-expectorated sputum was allowed to fall directly into the hardening fluid. When hardened the mass was imbedded in celloidin, and so cut. Sputum which is simply slimy, without definite tenacity, is unsuitable for this mode of examination. The author stains his sections with safranin, alum-carmine, or hæmatoxylin and eosin. In three out of four cases of pulmonary tuberculosis he was able to demonstrate giant cells in sections of the sputum.—*Brit. Med Jour.*

DOUBLE SUBACUTE GLAUCOMA.

Before the London Ophthalmological Society, Critchett (*Lancet*, October 24, 1891) reported the case of a woman, 29 years old, in which, within twenty-four hours after a serve shock, there was felt intense pain in both eyes, with vomiting and loss of vision. The eyes soon became densely hard, the pupils dilated, and the media so hazy as to interfere with a satisfactory view of the fundus. There was doubtful perception of light. The results of operative interference were not encouraging, and it was at the urgent solicitation of the patient and her mother that a double iridectomy was performed. The wounds healed favorably, but the recovery of vision was gradual and slight. The discs subsequently showed moderate cupping. At the end of fifteen years little change had taken place.—*News.*

GANGRENE FOLLOWING HYPODERMIC INJECTIONS OF ANTIPYRINE.

Verneuil reported to the French Academy of Medicine, recently, two cases of partial gangrene of the dorsal aspect of antipyrine. In these cases the injections, had been administered in the vicinity of the region in which the pathological process occurred. The dose which was injected was not ascertained in either case. The character of the trouble for which these injections were given were in one case a wrench followed by pain in the thigh and leg, and finally in the toes; in the other case it was an aphyxia of the extremity accompanied by violent pain.

A BULLET IN THE SKULL FOR FORTY-THREE YEARS.

Saxer (*Corresp.-Blatt. f. Schweizer Aerzte*, September 15, 1891) reports the case of a soldier who, when twenty years old, was struck by a bullet in the region of the left mastoid process, the missile perforating the bone and remaining unextracted. The patient lived for forty-three years after the reception of the injury. For twenty years a sinus persisted, the wound suppurating moderately. The patient complained of pain and a sense of weight and boring in the head and noises in the ears; there were men-

tal confusion, impairment of memory, and other psychical symptoms. At the autopsy the flattened bullet was found imprisoned between the dura mater and the bone, in the midst of an inflammatory hyperplasia, behind and below the pervious defect in the bone. There was a permanent depression at a corresponding point in the left occipital lobe.

GASTROSTOMY IN CANCEROUS STENOSIS OF THE CARDIAC ORIFICE OF THE STOMACH.

Dr. Victor von Hacker, of Vienna, states (*Centralbl. f. Chir.*, No. 37, 1891) that he is opposed to Lauenstein's conclusion that extreme cancerous constriction of the cardiac orifice of the stomach is an absolute contra-indication to gastrostomy. Whilst recognizing the importance, from scientific and diagnostic points of view, of distinguishing concer of the lower part of the œsophagus from cancer of the cardiac orifice of the stomach, he holds that such attempts at localization have no bearing on the choice of treatment. He gives brief notes of six cases, which show that gastrostomy performed as a palliative plan of treatment may be attended with results just as good in cancer of the cardiac orifice, even when a tumor can be felt in the epigastrium, as in cancer of the lower end of the œsophagus. In comparing these six cases with nine other cases in which he performed gastrostomy for cancer of the œsophagus, he can find no difference between the two series with regard to the feasibility of the operation. The fistula was as readily established in one set of cases as in the other, and an equal prolongation of life was attained. In studying the details of his fifteen cases, von Hacker finds that the occurrence of more or less severe bronchitis has a most unfavorable influence on the results of the operation. Snch a condition, it is pointed out, occurs for the most part in cases of cancer affecting the œsophagus. In none of the above-mentioned cases was life much prolonged after gastrostomy. The author believes, however, that the operation serves to render the latter days of the patients more tolerable, for the troubles which, with continuous fruitless efforts to take food, are caused by the uninterrupted retching of mucus and by frequent vomiting, are very distressing. It is acknowledged that no good result can be expected from gastrostomy in cases in which the new growth has involved a large portion of the stomach, especially the greater curvature, and has probably contracted extensive adhesions with the surrounding tissues. Under such circumstances one would be able, as a rule, to make out the presence of a large gastric tumor. In ordinary cases, however, of annular carcinoma of the cardiac orifice the digestive function of the stomach is not much impaired, even when the new growth is almost as large as the first, and involves, to some extent, the lesser curvature. Under such conditions as these, gastrostomy may be performed with as good prospects of success as in cases of cancerous stenosis of the œsophagus. By the author's plan of operation, in which the fistulous opening is established in the middle of the rectus muscle, it is possible to bring the abdominal wall, which at this point is lax, into close contact with the small and retracted stomach. With the incision made close to the costal margin the surgeon might not always succeed in doing this.—*Brit. Med. Jour.*

PSEUDO-TUBERCULOSIS.

Professor Hayem reports this case: The patient was a youth, 17 years of age, without any hereditary history of tubercle, who had had typhoid fever at the age of thirteen. For several months prior to coming under observation a slight bronzing of the skin was noticed. This was followed by general malaise, with vomiting and all the signs of a febrile gastric affection. The temperature remained raised for several days, and then dropped. The patient then appeared to fall into collapse. The extremities were cold, temperature subnormal, and he complained of vague muscular pains and extreme weakness. A diagnosis of gastro-enteritis was made, but no cause could be discovered. The tongue was pale and furred; vomiting became more frequent; there was great thirst; the stools were normal, but sometimes diarrhœa occurred. Liver, spleen, and lungs normal; cerebral symptoms absent. The patient eventually died of cardiac collapse. Owing to the increase in the bronzing of the skin the diagnosis of Addison's disease was finally made.

At the autopsy the right suprarenal body was normal, but the left was found to be transformed into a grayish mass; the glands of the neighborhood were normal. The grayish mass was softened in the centre, which was surrounded by round cells. No tubercular nodules could bee seen, giant-cells were absent, and the search for tubercle bacilli was unsuccessful; but, on the other hand, the bacilli of pseudo-tuberculosis were

found. The stomach was normal. The intestines were somewhat inflamed, especially around Peyer's patches. The follicles, both isolated and agminated, were enlarged, and in them the characteristic bacilli were found; the blood also contained them. The lungs were normal. Cultures made from the blood, the intestine, and all the abdominal organs produced similar bacilli to those obtained from animals which had died of pseudo-tuberculosis. Inoculations made on animals from the cultures produced the disease. This is characterized by the formation, especially in the abdominal organs, of a condition which to the naked eye is precisely similar to miliary tubercle. Small nodules are formed, which under the microscope are seen to consist of collections of small rounds cells, surrounded by cells more epithelial in character; giant-cells are rare. The bacilli are extremely difficult to stain in the tissues, but cultures are easily made. The organism grows well on all the ordinary media, especially nutrient gelatine. In forty-eight hours at the ordinary temperature a luxuriant growth results. The bacilli are short, thick rods, appearing at first sight almost like diplococci. Under a high power, however, the rod formation is undoubted. The bacilli exhibit a great tendency to run together into rods; in fact, some authors have declared that the organism is polymorphous. Animals inoculated with a fresh culture die in from ten to fourteen days. Intravenous injections produce death in about forty-eight hours, without the formation of the characteristic lesions.

CAUSES OF ARTERIO SCLEROSIS AND ARTERIAL CARDIOPATHIES.

According to the *Mercredi Médical*, September 30, 1891, Dr. Huchard places the poisons of imperfect digestion among the many causes of arterio-sclerosis and arterial cardiopathies. Excessive meat diet, or game slightly cooked or of poor quality, throws into the economy numerous ptomaïnes that are imperfectly eliminated and are capable of producing poisoning effects hitherto ascribed to heart trouble, as vertigo, dyspnœa, etc. Such conditions are favored by renal insufficiency, that in turn becomes a cause of arterio-sclerosis. The town-dweller and the wealthy eat too much meat. Poor people and peasants eat less, but of such inferior quality that the result is the same, namely, an excess of ptomaïnes. For those showing predisposition to the troubles under consideration, well-cooked meat once daily, fresh vegetables in abundance, and milk, constitute an ideal diet.

SURGERY.

PUNCTURE IN CHRONIC HYDROCEPHALUS.

Dr. Karnitzky (*Arch für Ped.*, August and October, 1891) reports five cases of hydrocephalus treated by puncture. In none of the cases did any complication follow the operation. In two cases the child died; in one the head was tapped twice, in the other five times; in the latter death was due to diarrhœa, and considerable improvement followed the first tapping. In another case, tapped five times, the child was growing rapidly worse when last seen; one case was only under observation five days; in the fifth case, a female child eleven months old, with a very large head, with extremely thin bones, six punctures were made during the course of the month; the circumference of the head was reduced from seventy to sixty centimetres, and when at the end of this time the child ceased to be brought for treatment, it appeared to be doing well.—*British Medical Journal.*

THE SURGICAL ASPECTS OF A LONDON FOG.

During the week ending December 26th, which was characterized by a very heavy fog, the accident cases received at one of the London hospitals consisted of 51 fractures, 6 dislocations, 24 sprains, 4 concussions, 13 contusions, 50 lacerated scalp wounds, and 1 rupture of the globe of the eye. The minor casualties treated consisted of: Sprains or contusions of the shoulder, 23; of the elbow 13; of the wrist, 23; of the fingers, 12; of the hip, 9; of the knee, 10; of the ankle, 24; of the toes, 6; of the back, 18; of the side, 23; of the jaw, 2; 8 lacerations of the finger, 4 of the face, 8 of the scalp, 5 of the forehead. In twenty-four hours—December 25th and 26th—11 cases were seen of fractured radius, either with or without fracture of the ulna.

THE SUTURE OF NERVES.

At a meeting of the Berlin Medical Society, Gluck (*Deutsche med. Wochenschr.*, 1891, No. 46 p. 1273) presented a man twenty-two years of age who, following a punctured wound of the arm, developed complete radial palsy. Enlarging the wound, it was found that the muscular spiral nerve had been divided. The proximal and distal extremities were carefully sutured and the wound was closed. At the expiration of a month, electric treatment was instituted. At

the expiration of five months, reactions of degeneration were still present, but power of movement was beginning to return. A favorable prognosis was expressed.

STATISTICS OF EIGHTY-FIVE OPERATIONS FOR STRANGULATED HERNIA IN HOSPITAL PRACTICE.

Dr. F. A. Southam, says in the *Lancet*: It is a recognized fact that in hospital practice the operation for the relief of strangulated hernia is attended by a high rate of mortality, this being generally due to one of two causes: either (1) the delay which has been allowed to elapse before surgical interference is sought; or (2) the injury which has been previously inflicted on the contents of the hernia by forcible, prolonged, or repeated attempts at taxis. The consequence is that the condition of the bowel is such that it is frequently past recovery, even though the strangulation is relieved immediately after the patient's admission into hospital. This fact is well illustrated by the following statistics of 85 cases of herniotomy, which have been under my care in the Manchester Royal Infirmary during the past twelve years, in almost all of which the operation was performed shortly after admission:

	No. of cases.	Recovered.	Died.	Mortality.
Femoral	37	22	15	40.5 per cent.
Inguinal	36	22	14	38.8 "
Umbilical	12	3	9	75.0 "
Totals	85	47	38	44.7 per cent.

At first sight the proportion of fatal cases appears to be unusually great, but on comparing the results with those of other large institutions, I find that the average morality attending herniotomy in hospital practice varies from 32 to 46 per cent., if the three varieties —femoral, inguinal, and umbilical—are taken collectively.

Femoral.—Of the 37 cases of the femoral hernia, two occurred in males and 35 in females; 9 between twenty and forty, 17 between forty and sixty, and 11 between sixty and eighty years of age. From the above table it will be seen that 15 terminated fatally. In 1 case the bowel, though otherwise healthy, was found to be ruptured at the time of operation, as the result of taxis previously to admission. In four cases, all fatal, where the bowel was distinctly gangrenous, it was opened and left in the sac; in three of these the stricture was not divided, in one it was divided. In the remaining 10 fatal cases the bowel, though extremely congested, was healthy, and it was therefore returned into the abdomen; in one of these it gave way on the seventh day, and there was an escape of fæces from the wound, which continued until death on the fifteenth day. In another case a fæcal fistula formed a few days after the operation, and after being present for some time gradually closed, the patient completely recovering. In three of the successful cases, where all the symptoms of strangulation were present, omentum only was found in the sac, thus illustrating the fact that the the symptoms produced by strangulation of omentum are indistinguishable from those caused by strangulation of the bowel. In each instance removal of the mass of omentum was followed by immediate subsidence of all symptoms.

Inguinal.—Of the 36 cases of inguinal hernia, one occurred iu a female and 35 in males; two under two years—viz., seven weeks and eighteen months,—two aged eighteen years, 13 between twenty and forty, 11 between forty and sixty, and 8 between sixty and eighty years of age. From the above table it will be seen that 14 terminated fatally. In two of these, where the bowel was gangrenous, it was left in the sac, the stricture being divided; in another the gangrenous portion of intestine was resected.

Umbilical.—The 12 cases of umbilical hernia all occurred in females; seven between thirty and fifty, and five between fifty and seventy years of age. No less than nine cases terminated fatally, thus illustrating the very high mortality which attends operation in this variety of strangulated hernia. In nine cases the bowel was sufficiently healthy to admit of its return into the abdomen; in three cases, all fatal, portions of gangrenous intestine were resected, the ends of the bowel being brought together in two cases by sutures, in one by Senn's plates.

Cause of death in the 38 fatal cases.—In 10 the bowel was found to be gangrenous at the time of operation, and in one case ruptured as the result of previous attempts at taxis. In the remaining 27 fatal cases the bowel, though more or less congested and tightly constricted, was in a sufficiently healthy condition to allow of its reduction. In 16 of these, where a post-mortem examination was made, the bowel was found to have become gangrenous in four cases; in 10 cases it had ulcerated, and perforation had taken place at the line of construction. In one case there were evidences only of peritonitis; in another, where the cause of death was diabetic coma, the bowel itself as well as the adjacent parts were in a healthy state. In 11 cases no post-mortem examination was obtained, and the exact cause of death was therefore not made out.

Method of operating.—In every case the sac was opened, and for some years it has been my custom to perform a radical cure at the time of operation, provided the bowel is in a healthy condition. If, however, its condition is at all doubtful, the neck of the sac is not closed, and the external wound is left partly open, a drainage-tube being inserted in order to provide an outlet for the escape of fæcal matter in case the bowel should give way after its return into the abdominal cavity.

THE HEALING OF WOUNDS IN BLOODLESS OPERATIONS.

The after effects of the bloodless system of operating, as carried out by means of Esmarch's bandage, not having been very satisfactorily ascertained, Dr. Sokolovski of St. Petersburg, working in Professor Ivanovski's laboratory, has recently performed a large number of experiments for the purpose of ascertaining whether under this system the healing of wounds is at all altered or retarded. His plan was to makesimilar incisions or other wounds on the two hind legs of a dog or a rabbit. One of the limbs had been rendered bloodless by an elastic bandage, while the other was operated on without this precaution. Both wounds were dressed, and their subsequent progress compared both by ordinary and by microscopic observations. The regeneration of epithelial elements is brought about by the multiplication of the cells of the formative layer by indirect or partially direct division. Sometimes the wound becomes covered with an epithelial growth, which is inefficient, not being permanent, but undergoing degeneration. Generally the cells of the old epithelium at the edges of the wound undergo changes consisting in a diminished amount of chromatin, in consequence of which the nuclei are bright and stain badly, or the chromatin fibres become diminished in number, but are shorter and thicker; these changes do not, however, go as far as chromatolysis. Mitoses of the epithelial cells are mostly seen when the wound is covered with one or two layers of cells; sometimes, however, they occur in the cells of old epithelium lying in close vicinity to new cells. All the above processes take place in wounds, whether they have been inflicted on a bloodless limb or on one in its ordinary condition; but in the former case there is a marked retardation. If the bloodless condition of the part has not lasted more than three hours, the alteration in the cells is but slight, and confined to the superficial layer. When, however, it has persisted for a longer period, the cells of all the layers are affected, the nuclei becoming stellate, staining badly, appearing too bright, and having a deficiency of chromatin. The mitoses are diminished in a wound made in a bloodless part, and some of the karyokinetic figures are abnormal, the rays of the asters being irregular or shortened and thickened—*Lancet.*

A BULLET IN THE BRAIN FOR TWENTY-NINE YEARS.

Conniff (*Vis Medicatrix*, i, 5, 1892 p. 279) has reported the case of a man, sixty-three years of age, whom he was called to treat in an attack of enteritis. There was, besides, a history of pain in the head and an inability to lie on the right side. Inquiry elicited the fact that twenty-nine years previously the man had received a gunshot wound at the left angle of the mouth, the bullet, it was supposed, entering the brain. The patient maintained that upon rotating his head he could feel the missile just back of the left ear. He suffered almost constant headache, at times most intense and attended with vertigo. Hearing was lost on the right side. Vision was impaired on the left. The patient died, and at the autopsy, in addition to the lesions of a plastic enteritis, a bullet was found imbedded in the occipital lobe of the left cerebral hemisphere, behind the posterior cornu of the lateral ventricle. The bullet had entered near the left angle of the mouth, passing beneath the malar bone and entering the cranium through the left orbital cavity close to the optic nerve; thence it had passed toward the left lateral sinus.—*News.*

THE POSTURE OF THE PUERPERAL PATIENT.

Duke (*Medical Press*, 1892, No. 2753) considers the usual custom of keeping the puerperal patient upon her back for a long time after labor to be most injurious. He claims that drainage of the birth-canal is least thorough in this position and that retro-displacements of the uterus frequently result from this custom. He favors the semi-recumbent position upon the hip or the sitting posture for a few moments after the first twenty-four hours. These positions favor involution and promote the action of the bowels. The best posture to favor the delivery of the placenta is the prone position, and the puerperal patient should assume this posture for a short time daily.

THE RADICAL TREATMENT OF PROSTATIC HYPERTROPHY.

Dr. K. Eigenbrodt presents the following conclusions on this subject, which are based upon an experience of five cases and a thorough study of the literature of the operative treatment:

1. Observations have shown that in most cases of obstructing hypertrophy of the prostrate a radical operation is perfectly feasible. This consists in a suprapubic prostatectomy, by which all the protrusions at the vesical neck due to the enlargement of the prostate should be removed, if this is possible.

2. Prostatectomy gives the best results if performed at an early period, and early operations before the occurrence of cystitis would be indicated in all cases if it were possible to prevent the development of a cystitis due to the operation itself.

3. Even in advanced cases we can sometimes effect considerable improvement and even a restoration of the function of voluntary urination.

4. In cases apparently cured by the radical operation great attention should be paid to the persisting weakness of the bladder (residual urine), and when necessary the patients should be treated for this condition and kept under observation.

5. In obstructing prostatic hypertrophy, the obstacle to urination is not so frequently due as is generally believed, to a valve-like occlusion of the urethral orifice by a prominent lobule or wall at the vesical neck. Much more frequently this is caused by a general and uniform enlargement of the vesical end of the prostate, in connection with the formation of a *cul de sac* in the bladder. If during the performance of prostatectomy, in the latter case, everything that protrudes into the bladder cannot be removed, we should attempt to secure a free passage for the urine by a *wedge-shaped*, deep excision at the posterior margin of the internal urethral orifice.—*Beitrage zur Klinischen Chirurgie, Bd.* viii, *Hft.* 1.

CATHETERIZATION OF THE FEMALE BLADDER.

Professor Parvin advocates the use of the ordinary male catheter, instead of the female, as by its greater length the bladder can be emptied without soiling the clothes or necessitating any exposure of the patient. It is passed into the bladder just as easily as the other kind.—*Coll. and Clin. Record.*

OBSTETRICS.

CÆSAREAN SECTION.

Bogdanik, of Biala (*Centralbl f. Gynäk.*, No. 6) was called in, on September 11th, 1891, to a woman, aged 40, in labor at term. She had already borne twelve children. She was much emaciated and a fœtid discharge issued from the vagina. Hard carcinomatous masses were detected in the vagina, extended as low down as the meatus. The cervix was extensively involved, and the point of the finger could hardly be passed into the os externum. Fœtal heart sounds were audible though weak. The patient had suffered from profuse flooding four months previously, but how long the cancer had existed could not be ascertained. In order to save the child and relieve the mother, Cæsarean section was performed. Tho operation was undertaken in a very small room in a cottage in a remote German-Polish village. The patient was first put under the influence of a mixture of equal parts of chloroform and ether; the charge of the anæsthetic was then entrusted to a country midwife. The abdominal walls were washed with soap and carbolized water, and compresses soaked in the same solution were laid over the vulva. An asphyxiated child was delivered; it soon recovered. The cord was tied in two places and the placenta removed. The uterine cavity and the operation wound were washed with carbolic solution, then the uterine wound was sutured after Sänger's method. A continuous sublimate catgut suture was employed. Iodoform powder was strewn over the uterine cavity and the peritoneum as well as the external wound, which was dressed with iodoform gauze. The mother lived a fortnight, dying of exhaustion; the child, a well-nourished girl, was saved. Bogdanik maintains that Cæsarean section, like herniotomy, is an operation that any practitioner may be called upon to perform, sometimes under unfavorable surrounding conditions.

Eckerlein, of Königsberg (*ibid.*, No. 8, 1892) gives details of a Cæsarean section in a patient aged 39. Her last period occurred at the end of October, 1889; the fœtal movements were first felt in the first half of March. During the first three months there was much vomiting. She had never been pregnant before. The waters broke on August 24th. Three days later the pains set in; they lasted four days, yet the labor made no progress. The child was very large and evidently dead, the pelvis flat, and uni-

versally contracted. The uterus was tympanitic on percussion. On account of the narrowness of the pelvis, the size of the fœtus, and the great wish of the mother that she might bear a child on a subsequent occasion, Cæsarean section was determined upon, in preference to craniotomy or Porro's operation. Sänger's procedure was strictly carried out. The uterus contained much fœtid gas. A towel soaked in a 4 per cent. boracic solution, was passed behind the uterus. An elastic ligature could not be brought round the cervix, as the head of the fœtus filled the pelvic brim. The uterus was drawn well to the right, and its anterior surface slightly twisted to the right. A long incision was made, and a putrid fœtus extracted. Contractions following and the placenta was expelled. The uterine cavity was stuffed with a long strip of iodoform gauze, soaked in a 5 per cent. solution of carbolic acid. Uterine contractions came on on the third day, but ceased when the gauze was removed. An abscess formed in the abdominal wound. The patient ultimately recovered.—*Brit. Med. Jour.*

THE INFLUENCE OF PREGNANCY ON EPILEPSY.

A very exhaustive article by Dr. Guder on this subject is carried through two numbers of the *Medicinish-chirurgisches Centralbl.* The author has made extended research into the data bearing on this question. This, taken conjointly with his own personal experience of such cases, enables him to draw the following conclusions: That epileptic attacks were, as a rule, absent during pregnancy, but that they were always sure to make their appearance during and after the puerperal period; that there was the fact of the offspring of such women being predisposed to epileptic or eclamptic attacks, to be taken into consideration. For his part the author was disposed to persuade, as far as possible, epileptics from marriage and that if pregnancy did occur he was in favor of artificial abortion. He thought that an effective means of stamping out, or at any rate of preventing children being born with a predisposition to epilepsy, would be the sterilization of epileptics by castration or ligation of the tubes. As to the predisposition of epileptics to eclampsia there was still a great difference of opinion among observers in this direction. Nerlinger thought that for one thing a differential diagnosis of an attack, occurring during the puerperal state in an epileptic, was difficult to make, as to whether it was an epileptic or eclamptic seizure, and that as to the question of predisposition of epileptics to eclampsia the matter was by no means settled. And also that in young children predisposed by neurotic inheritance to epilepsy it would be a difficult matter to say whether the first attack was epilepsy or eclampsia. Fere thought that there was a close association, in predisposed neurotics, between epilepsy and eclampsia.—*Journal of Nervous and Mental Diseases.*

GENEVA CHEMISTS AND THE PRESCRIPTION.

Geneva chemists have to keep the prescriptions which they dispense. The reason for this is explained by Mr. A. Cordes in the *Lancet* as being the fact that about twenty-five years ago a nurse obtained a prescription for atropia. With that prescription she went from one chemist to another, and got large quantities of this drug, with which she poisoned many of her patients. She was tried and condemned. The authorities deemed it prudent to pass a law obliging the chemist to keep the prescriptions, thinking by it to avoid any crime of the sort in the future.

GYNÆCOLOGY.

LAPAROTOMY UNDER COCAINE.

Dr. Emory Lanphear, in a paper read before the Kansas City Acad. Med., said:—

There are, many times, patients who require abdominal section yet who are in such physical condition as to almost absolutely prohibit the administration of either chloroform or ether. In such instances the surgeon may without hesitation make the operation under the effects of cocaine. The following is an instance:

Mr. W——, age 52, patient of Dr. F. R. Wheeler, of Sawyer, Kansas, was admitted to All Saints' Hospital suffering from a cancerous tumor of the left side of the neck, of very rapid development. Patient began to experience difficulty in swallowing about nine weeks ago, when his weight was 165 pounds. The dysphagia increased at an alarming rate and two weeks before admission to the hospital it became a matter of impossibility to swallow at all. Partial removal of the tumor was done by Dr. Wheeler and McCoy (of Pratt, Kans.), under local anæsthesia, it being deemed inadvisable even at that date to use chloroform or ether. There was very little improvement, so the patient was brought to Kansas City to the hospital for further treatment.

When admitted he was *in extremis,* weight less than 80 pounds and at the gate of death from starvation. Upon the evening of admsssion the abdomen was carefully scrubbed and shaved and a pad of moist bichloride gauze applied. At 9 A. M. on the following day, assisted by Drs. J. F. Binnie and T. B. Thrush (Dr. Sawyer standing ready to administer ether if it should be required), I made a gastrostomy under local anæsthesia from cocaine. One-half dram of a 4 per cent. solution was injected in eight places into the subcutaneous areolar tissue along the proposed line of incision. As soon as the analgesic effect was established the usual operation was made, and without any pain or even sense of discomfort on the part of the patient. The only disagreeable symptom was a slight nausea when the left lobe of the liver was turned up to allow the stomach to be drawn up into the wound. The operation lasted 22 minutes. How much longed the operation might have been prolonged without discomfort to the patient is a question of interest. But as a large number of the abdominal operations can be made within twenty minutes it is not so important as might be supposed. Besides the fact that the primary depressant effect of a general anæsthetic was avoided by the use of cocaine, there were two other points of much importanee in this case, viz., the absence of the vomiting that nearly always follows chloroform or ether, and especially the *absence of shock.* There was a total absence of anything like shock, and if this be found to be a general rule an immense gain may be made in sewing up stab or even gunshot wounds of the intestine (as well as in other numerous abdominal operations), by the use of local instead of general anæsthesia.

FIBROID TUMOR OF THE FALLOPIAN TUBE.

Spaeth (*Zeitschrft f. Geburtsh. u. Gynäk.,* vol. xxi, pt, 2, 1891) describes a case where a woman suffered from frequent vomiting and continual pain in the left side. Abdominal section was performed and a tumor was removed after the separation of peritoneal adhesions. At the operation it was found that the left tube ran into the growth ; afterwards, when the tumor was examined, it was found to consist of a uniform hypertrophy (1½ inch thick) of a tubal well. Two-fifths of an inch of the uterine half of the tube remained attached to its inner aspect, whilst the abdominal end hung from its outer side. On microscopic examination the tumor proved to be a fibromyoma, and there was no evidence of inflammation. The existence of a myoma on the tube is easy to understand, for the tube is developed from Müller's duct like the uterus, an organ very subject to myoma. Nevertheless, myoma of the tube is exceedingly rare.—*British Medical Journal.*

EXTIRPATION OF UTERUS FOR SLOUGHING SUBMUCOUS FIBROID.

Demetrius von Ott (*Volkmann's Sammlung klin. Vorträge,* No. 34, 1891) considers that suppurative disintegration of a submucous uterine fibroid is best treated by total extirpation of the uterus, which alone can insure the complete elimination of the infected area. Whenever there is any reason to suspect that the adjacent peritoneum has already become affected, special care must be taken to allow for drainage through the communication established at the operation between the vagina and peritoneal cavity. In cases of gangrenous destruction of a fibroid in the uterine cavity, the condition of the appendages must be made out as accurately as possible, so that the surgeon may decide upon how to dispose of them, and may add to our experience of their condition and the necessary treatment in this grave complication.—*Brit. Med. Jour.*

PÆDIATRICS.

THE TREATMENT OF CROUPOUS PNEUMONIA IN CHILDREN.

S. H. Dessau (*Arch. of Pædiatrics,* September, 1891) says the main danger to life in croupous pneumonia arises from the circulation; hence the physician's chief efforts should be directed to correcting this mechanism. Other influences, such as the effects of the disease poison, should also be taken into consideration. A pulse of 160, with temperature 104° to 105° F. at the onset indicates that the disease is of a serious character, but this alone does not always indicate an unfavorable termination. High temperature may, however, lead to convulsions in children, and antipyrin may thus be sometimes found of great service. Apathy, with inability to hold up the head in the early stages, is of unfavorable significance. The amount of albumen in the urine has also a definite relation to the mortality. The extent of lung tissue involved may bear no relation to the danger of heart failure, but when both lungs are involved few cases recover. A natural termination begins suddenly with profuse perspira-

tion, caused by sudden return of blood to the cutaneous vessels; the indication seems therefore to be for diaphoretics, such as nitrites, Dover's powder, etc. In more serious cases a warm bath, at 95° F., or hot sponging, etc., may be employed for the same purpose. For the more sthenic cases recourse may be had to the "ice cradle," or wet pack. The dilatation of vessels produced by one of the above methods will both relieve pulmonary congestion, and perhaps aid the excretion of some of the disease poison. The liver has an immense blood-holding power, and a way of making use of this to relieve pulmonary engorgement is to stimulate its function. The moderate use of calomel (one-tenth of a grain every hour for six doses, and every three or four hour afterwards) will often produce excellent results. The idea of obtaining any action on the lung by increasing absorption of the plastic exudation must be laid aside, for this is not the object to be desired. Aconite may also be of service given at the onset in hourly drop or half-drop doses; it slows the pulse, and gives the ventricle a longer time for its diastole. The frequent use of digitalis in croupous pneumonia is based on entirely false principles, for it has a tendency to diminish the vascular area; its action is to empty the arteries into the veins and not the veins into the arteries, as is desired. It stimulates the left heart, which has already an undue advantage over the right heart. Carbonate of ammonia is also condemned, the stimulant expectorant effect tending to convert an otherwise favorable case into a fatal one. Large doses irritate the stomach, and thus also diminish the chances of recovery. Locally, poultices may be useful as an aid to diaphoresis. A "warm wet binder" is a convenient and preferable substitute. The ice bag may be of service in strengthening the heart, but it must be used with care in children, as it often produces collapse.—*Brit. Med. Jour.*

SEAT-WORMS.

Success in the treatment of cases of seat-worms depends upon the prolonged and constant use of a vermifuge or some active vermicide. The worms are generally attacked by means of injections, suppositories or ointments. Of the injections, a favorite prescription is a solution of common salt in the proportion of one to five. Sometimes sugar and water may be used, and an infusion of absinthium is employed by some French practitioners. Still others employ simply cold water. It is said that West and Barthez recommended astringent injections composed of the perchloride of iron and lime-water, as follows:

℞ Lime-water ..... f ʒiv.
Perchloride of iron ..... gtt. x. M.

Rossbach used, with excellent results, the following:

℞ Naphthalin ..... gr. xv.
Olive oil ..... f ʒiss. M.

Trousseau is said to employ the following suppositories:

℞ Hydrarg. chlorid. mit ..... ʒi.
Vaseline ..... ʒiij. M.

When the worms inhabit the higher portions of the rectum they will probably resist all therapeutic measures unless they be attacked through the stomach. Under these circumstances it may be well to employ calomel and santonin, of each one-half grain, which is to be administered early in the morning in order that the calomel may act by evening. This dose is the proper one for a child of two to three years.—*Revue Génerale de Clinique et de Therapeutique.—Med. News.*

DEATH AFTER VACCINATION.

A case is reported in the *Lancet* for January 30, 1892, of an eight-months' child, weighing when born four pounds and three ounces, which was vaccinated eight days after birth, and died some thirteen days later. Cold cream had been applied to the arm by the mother, and the sores had not healed. There was a slight lung affection found at the post-mortem, but death was undoubtedly accelerated by the vaccination.

ETIOLOGY OF DIPHTHERIA.

Baginsky, in a study of 93 cases of diphtheria, found Löffler's bacillus in 68 cases, equal to 73 per cent. Of these 68, 27 died. In the 25 cases in which the bacilli were not found, but which, microscopically, gave indications of diphtheria, only one died.—*Archiv. für Kinder.*, Berlin, Nos. 1, 3, 4, 5, 6.

LEAD POISONING FROM PAPER HANGING.

Dr. Guyot reports (*Progrès Med.*, Nov. 28, 1891) the case of a servant girl attacked by lead paralysis of the four extremities. The source of the lead was undiscoverable. The patient went from her country place to the city home of her master. Here she recovered. On her return she was again attacked by the paralysis, as also was a servant room-mate. Analysis of the paper hangings revealed great quanties of lead. Dr. Labbé, in the discussion of the case, said that lead paralysis occurred among paper-painters.

HYGIENE.

EFFECT OF DEEP INSPIRATION ON THE ASSIMILATION OF FAT.

Acting on Professor Chudnovski's advice, Dr. A. Pavpertoff has made a series of observations on the effect of deep or forced inspiration and expiration on the assimilation of the fatty matters contained in food. The observations were made on nine healthy young persons, some of them being carried out in winter, others in summer. The sittings were held in a large and well-ventilated room, each subject making from 120 to 200 forced inspirations and expirations. By analyses of the fæces during the three periods —before, during, and after the forced inspiration—it was found that the amount of fatty acids in the fæces in all cases diminished during the second period, the average diminution being 1.246 per cent. In the third period the quantity of fatty acids as compared with that excreted in the first, diminished slightly in some cases, and increased slightly in others. All that can be stated therefore as the result of the experiments is that a slight increase in the assimilation of fat takes place while forced or deep respiration is going on. The above research is published as a "preliminary note" in the *Vrach*, No. 6, 1892.—*Lancet.*

PROPHYLAXIS OF INHERITED INEBRIETY.

At the quarterly meeting of the Society for the Study of Inebriety held at 11 Chandos Street London, on Tuesday, 5th inst., Dr. Charles Hare presiding in the absence of Dr. Norman Kerr, a paper was read by Mr. James Stewart, F.R.C.P.Ed., of Clifton who said they could not too often as scientific men protest against the use of the words drunkenness and inebriety as if they are convertible terms. M. Trelat had put the difference very clearly thus: "Drunkards are people who drink when they find any opportunity of drinking. Dipsomaniacs are diseased persons who get drunk whenever their attack seizes them." The drunkard, continued the lecturer, if he continues his vicious course might so injure his brain structurally or functionally that he would eventually become an inebriate. The inebriate, on the other hand, was an individual who was in most cases born with an unsound brain. He might even be a man who had never so much as tasted any alcoholic drink in his life. True, the disease might be acquired, but the experience of fifteen years had taught him that the neurosis was in most cases an inherited one. The neurosis often led the sufferer to seek relief by the narcotism of alcohol, and so cause and effect were greatly mixed up. Admitting, as we all must, that it was a transmissible cachexia, the question arises how best to prevent the germs of the inherited disease from being developed.

Dr. Joseph Parrish had said "inebriety might descend as inebriety, but it was just as likely to change the form of its appearance into insanity or other allied manifestation." Bearing this in mind, it is important that the child of an inebriate should be kept free from what might upset the nervous equilibrium, care being specially taken that the surroundings during early years were bright and calculated to develop the higher and nobler characteristics of the individual. He deprecated especially corporal punishment at the hands of strangers. He advised the mother, if her husband had been inebriate at the time of her child-bearing, to not only bring up her children as total abstainers, but, by telling them after puberty of their terrible inheritance, to warn them against ever touching alcoholic drink all their lives. The neglect to give this warning, the keeping back of this knowledge, had in some cases treated caused reproaches to be uttered against the mother for omitting to perform a duty to her child out of a desire to shield the memory of her husband. But if this duty was imperative in the case of a son, how much more so in the case of a daughter if either parent had suffered from the disease. If she is to marry, she ought to be warned as to the danger of marrying anyone whose family history was tainted with a neurotic inheritance—a danger enormously increased if she should marry a first cousin.

The lecturer concluded by the following summary of his views: 1. Drunkenness is a vice, inebriety a disease; the two terms must not be confounded. 2. The disease of inebriety once established may be transmitted to the patient's offspring either in the form of the alcoholic diathesis, epilepsy, chorea, insanity, or even tendency to crime. 3. The child of an inebriate born after the functional or structural lesion has been established is sure to inherit some nervous diathesis. 4. The only security against this diathesis developing as inebriety is by lifelong total abstinence on the part of the child. 5. Even the adoption of this precaution will not absolutely make certain that there will be no transmission of the cachexia by the child to his or her offspring. 6. To prevent the development of

the alcoholic neurosis in other directions—such as epilepsy—sudden excitement of the emotions and sensibilities, such as might be produced by corporal punishment by strangers, should in all cases be guarded against. 7. In the prophylaxis of inebriety the principle to be acted on with regard to children's training is that if we accentuate the good we attenuate the evil. 8. The marriage of the child or even the grandchild of an inebriate to a first cousin should be absolutely interdicted.

MEDICAL CHEMISTRY.

TINCTURE OF OPIUM IMPROVED.

Prof. Oldberg, in the *Apothecary* alludes to some tincture of opium made under his observation by R. B. Morrow of the Illinois College of Pharmacy, in which the opium was exhausted by warm water used in two portions, and the alcohol added to the water solution. The marc, when tested, gave no indications of alkaloids. It is claimed that warm water will readily exhaust all the useful constituents and leave most of the nauseous and odorous principles. The proportions of the liquid solvents were changed at the trial to nine parts of water and one part of alcohol, and it is claimed to be a change for the better in every respect.

QUININE HYDROCHLORATE.

The neutral hydrochlorate of quinine, official in the United States and various other pharmacopœias, crystallizes in white needles which are usually united in bundles, and which contain, when uneffloresced, 2 molecules of water of crystallization [$C_{20}H_{24}N_2O_2HCl.2H_2O$=396.4]. This water of crystallization escapes easily at 120° C. without causing the salt to melt. The melting point of the salt lies at 158° to 160° C., and even then the alkaloid does not suffer decomposition.

If an aqueous solution of salt, saturated at 15° C., is set aside for some time at a low temperature (0° C.), it happens sometimes that in place of the well-known long, asbestos-like needles there are formed large octahedral crystals belonging to the monoclinic system. On dissolving these crystals in water considerable short of saturation, and allowing the liquid to cool, the same kind of crystals are sometimes reproduced.

It was first supposed (by O. Hesse, from whose paper on this subject in Liebig's *Annalen*, 267, 142, we take this notice) that these crystals were due to the presence of an impurity of the quinine salt. But it was soon ascertained that they differed from the ordinary hydrochlorate of quinine merely in the amount of water of crystallization, containing 3 molecules instead of 2.

Acid Hydrochlorate of Quinine, which salt is especially useful for hypodermic purposes, is best obtained either by decomposing the acid sulphate of quinine (disulphate or "bisulphate of quinine) with an equivalent quantity of barium chloride, or by adding to a solution of the neutral hydrochlorate in water 1 molecule of hydrochloric acid. On evaporating either of these solutions at a gentle heat, the acid salt will separate, at a certain temperature, either in white, concentrically grouped needles or as a gelatinous mass. The latter gradually passes into the crystalline form, particularly at a gentle heat. But in either case the resulting dihydrochlorate is *anhydrous*. The crystallized salt (that is, the salt which separated in crystalline groups) may be dried up to 110° C. without undergoing any change; the gelatinous salt, on the other hand, when thus dried, becomes white and opaque. The crystallized as well as the hyaline salt, after it has become opaque, yields, upon being triturated, a powder which reflects sunlight with a distinctly blue tint.

REACTION FROM AN AQUEOUS EXTRACT OBTAINED FROM BACTERIA.

Roemer (*Wiener klin. Wochenschr.*, No. 45, 1891, p. 835) has recorded a series of experiments made with an aqueous extract obtained from cultures of the pneumonia-bacillus and the bacillus pyocyaneus. Three guinea-pigs inoculated six weeks previously with the fluid obtained from tuberculous lymph-glands died shortly after having receiving injections of the extract. The injections were in each case followed by elevation of temperature. Post-mortem examination disclosed, in addition to the evidences of tuberculosis, enlargement of the lymphatic glands, serous effusions, and injection of and hæmorrhage in various viscera. Injections in three healthy animals were followed only by elevation of temperature.—*News.*

A NEW AND RAPID TEST FOR SUGAR.

At a meeting of the Austrian Surgical Society, Professor Nothnagel showed a handy test for sugar, which had been forwarded to him by Dr. Becker, of Cairo. It is simply a visiting card saturated with a solution of potash, part of which is coated with sulphate of copper, and the urine applied. The card

is then laid in the globe of a lamp, when the saccharine urine will color the card brown, and this color will be the deeper the greater the amount of sugar.

NEWS AND MISCELLANY.

MEDICAL READING PARTIES.

Dr. J. A. Campbell, of Carlisle, has recently, in the pages of the Edinburgh *Student*, proposed a plan for the utilization of county hospitals and asylums for teaching purposes during the summer months. A young graduate, Dr. Campbell suggests, might act as reading tutor in charge of a party made up principally of third year's students, who could attend a provincial hospital and an asylum if convenient. Such attendance and clinical instruction could, it is thought, be easily arranged, and probably vaccination and attendance on midwifery cases could also be obtained. There can be no doubt that Dr. Campbell's idea is good. Independently of idle students who cannot be made to work, and of young men of determined and methodical character who work in term time and make it a rule to enjoy themselves during the holidays, there remains a type of student who soon becomes sated with his vacation. The curriculum is short, and such a student may wish to make the most of the two or three years of tutelage left to him when he begins his clinical studies. The utilization of asylums in the manner suggested would, perhaps, present difficulties. The county hospital is a simpler matter, but though the chief difficulty is simple enough, it is none the less a difficulty. County hospitals with about a hundred beds usually have a dressing staff of their own. First-rate pupils are yearly turned out of the hospitals at Brighton, Exeter, and elsewhere. Besides, the reading party would in many cases be forestalled, as it is the custom amongst many students in London hospitals to seek dresserships in country hospitals, and they often prefer the vacation to dress in, as such an arrangement does not interfere with lectures and classes at the London school. Vaccination and attendance on midwifery would involve careful arrangements with local practitioners and midwives. No doubt, with a little determination all difficulties could be overcome. The party might arrange to go round wards with a medical officer of a country hospital, and could thus learn much even if they were not suffered to be full dressers. A certain amount of pathology could be studied, and in other respects the reading party could combine instruction with recreation. Perhaps, too, the sanitary authorities might aid them, for a consideration, in learning the rudiments of health administration.—*Brit. Med. Jour.*

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

The Forty-second Annual Meeting will be held in Harrisburg, on Tuesday, Wednesday, Thursday, and Friday, May 17th, 18th, 19th, and 20th, 1892, commencing on Tuesday, May 17th, at 9 A. M.

APPOINTMENTS FOR 1892.

1. Address on Practice of Medicine.—Dr. J. H. Musser, Philadelphia.
2. Address on Surgery.—Dr. T. D. Davis, Pittsburgh.
3. Address on Obstetrics.—Dr. H. G. McCormick, Williamsport.
4. Address on Mental Disorders.—Dr. J. W. Phillips, Clifton.
5. Address on Otology.—Dr. G. R. Roher, Lancaster.
6. Address on Hygiene.—Dr. A. A. Woods, Erie.

TO BE ACTED UPON.

Report of Committee on Pharmacy.—Dr. H. A. Hare, Philadelphia, Chairman.

Report of Committee on Contagious Ophthalmia.—Dr. J. A. Lippencott, Pittsburgh, Chairman.

Report of Committee on Rush Monument Fund.—Dr. W. Murray Weidman, Reading, Chairman.

Chairman of Committee of Arrangements.—Dr. Wm. T. Bishop, 211 Pine Street, Harrisburg, to whom all applications to read papers at this session should be sent not later thon April 1st.

Secretaries of County Medical Socities are earnestly requested to forward at once complete lists of their officers and members, giving the post office address of each.

Every delegate, before admission, shall present a certificate of delegation, signed by the President or Secretary of his County Society.

Every permanent member (not a delegate), before admission, shall present a certificate of good standing in his County Society.—[Extract from Constitution.]

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1400 Pine St., Philadelphia.

The railroads will sell excursion tickets on card orders. All who desire orders should notify the Permanent Secretary, stating which railroad must be used.

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THE
MEDICAL AND SURGICAL REPORTER.

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CLINICAL LECTURES.

EARLY ARTHROPATHIES IN TABES DORSALIS.

By PROFESSOR CHARCOT,
PARIS, FRANCE.

A CLINICAL LECTURE DELIVERED AT THE HOSPICE DE LA SALPETRIERE.

Gentlemen:—I will to-day call your attention to an extremely interesting and instructive case. It is a syndrome dependent on a progressive locomotor ataxia, and which appears under such special circumstances that it requires, in the first place, a minute examination, and, secondly, a knowledge of the various aspects under which the malady makes itself manifest, in order to establish a diagnosis.

Before entering into a discussion of this case let me go over some of the general characters of tabes dorsalis. I place before you upon the board the list of symptoms which I call the *tabetic series* ; they are about 18 or 20, and their combined variety represents all the clinical points of tabes.

The classical type of the disorder as described by Duchenne is, of course, exceptional, and regarding ataxia the anomalous characters of the affection constitute the rule, especially at the very onset. It is for this reason that I proposed, some time ago, to call *locomotor ataxia* by the name of *tabes*, for, strictly speaking, an ataxis disorder may exist, for many years, without any loss of co-ordination of movement ; sometimes it never exhibits any motor disturbances, as I found recently in a post-mortem examination.

Although the various symptoms may appear in a variety of combinations, they follow ordinarily the order pointed out by Duchenne ; that is, we have first the prodromic period characterized by lancinating pains, ophthalmic disturbances (myosis, diplopia), and some vesical troubles which may come on periodically. These symptoms may last for four or five years or even more.

It would be convenient to call this period, the period of lancinating pains, but there is still a better denomination, the one given by Fournier in his remarkable work upon the subject ; that is, the *pre-ataxic period* which answers very well to the conditions exhibited. Such does not always occur in Duchenne's type of the disorder, and hence the difficulties from a clinical standpoint. You must remember this fact ; not one of the 18 or 20 symptoms of the tabetic series, by itself, explains the condition.

I will bring to your notice some examples : A patient comes to you complaining of a weakened condition of the eye-sight; there is achromatopsia and, on ophthalmoscopic examination, you discover an atrophy of the disc. You will have no difficulty in recognizing the existence of tabes, although there may be other symptoms, because the tabetic disc is extremely characteristic of the disease, and is sometimes the only sign manifest, preceding, for several years, the other symptoms of tabes. Another example: A man who has always been apparently healthy awakes at midnight taken suddenly with a feeling of great depression; he suffers from suffocation, is restless and exhibits a sort of laryngeal whistling sound. The crisis passes in a few hours, to be repeated the following nights, until a permanent snoring sound of the voice is produced. This is, then, a laryngeal crisis which may go on increasing for a considerable time before any of the other symptoms of the malady are made manifest. What I have just said of the laryngeal crisis may be similarly applied to the gastric troubles that I have at other times described. You

are familiar with these painful attacks, accompanied with gastric disturbances such as vomiting, loss of appetite and general depression deepening into collapse, which come on suddenly without any apparent cause; they last a variable time and disappear after one or two months, during which time the digestive functions are again re-established. Under these various insidious aspects of the malady, often interpreted as purely gastric or hepatic troubles, is hidden a tabes dorsalis. I recall the case of a patient that came under my observation some time ago, who complained of rectal pains likened to those produced by an introduction of a hot iron or a forced dilatation of the sphincter. These anal crisis, as I call them, had been unrecognised for a long time and were considered of no diagnostic value by the different eminent surgeons consulted by the patient. The nature of the disorder was made clear by the appearance of lancinating pains and other symptoms peculiar to tabes.

These are not the only symptoms included in our series. You will find under the name of trophic disturbances, fractures, arthropathies, and the falling out of teeth and finger nails. Is it possible for the trouble under consideration to appear primarily? Yes, and the case which I will submit to your study shows that the disease began by serious articular lesions. Its history is very simple.

Although not always, syphilis is a frequent cause of this affection and, therefore, I would advise you to examine the question of the acquired or inherited constitutional disorder. In the present instance we have the history of an alcoholic parent. I have told you before that every drop of seminal fluid, in an alcoholic man, contains, in germs, the entire family of the neuropathies. Further, the grandfather, on the paternal side, had convulsive spells the nature of which we have not been able to make perfectly clear. The patient himself has never been sick; he is neither syphilitic nor of alcoholic habits. He is 28 years old, married, his occupation being that of worker in bronze, which has permitted him to live in good conditions.

What has been the origin of the symptoms in the man under our observation? In September last he went to take a course of military instruction during a period of 28 days. He took a part in the great military manœuvres at Laon. From the first day of the month to the 10th he made, like his comrades, a daily march of 30 kilometers. On the 10th he felt an obtuse or dull pain over the left thigh and began to be unable to keep his place in the field. The military physician who examined him failed to recognise the affection. He was compelled to continue his march, and after four days he supported his trouble no longer and became unable to advance farther. Then he was sent to Paris where he arrived on the 21st, that is 11 days after the beginning of the disease. His regular physician examined him and said that he (the patient) had a double coxo-femoral arthritis. Is it possible that a simple arthritis could have made its appearance suddenly over both hip-joints and in ten days, according to the statement of the patient, disappear almost without the production of pain? Is this not a matter of reflexes? If our brother physician had not been taken up with his numerous occupations, on closely examining the patient he would have found, at least, that the case was a singular one.

The patient was in the hospital at Tenon, and was then brought here. I did not see the patient at first; he was sent by the resident physician, Dr. Dutil, to the ophthalmological ward where the inequality of the pupils and the Argyll Robinson sign were first noticed.

This association of a destructive arthropathia and the pupillary sign, induced me to suspect tabes. There are arguments in *pro* and *con;* however, the latter manifestations shows evidently that we have to deal with a tabetic arthropathia.

The patellar reflexes are normal, as you see; its abolition, so frequently met with in tabes, is not the absolute rule. Besides, you must not neglect to inquire into the urinary function. The patient tells us that from the beginning of the affection, he had been troubled with involuntary passages of urine at night, and always made efforts to prevent this disagreeable occurrence. This symptom may be included under the category of *false urination* of Professor Guyon. Finally, the patient suffered, after the trouble of the bladder, from pains in the feet and legs; these pains coming on and going away suddenly. We have, then, collected a sufficient number of symptoms—the Argill Robinson sign, paralysis of the bladder,

lancinating pains—with which to establish a correct diagnosis. Now, this man presents another phenomenon which belongs to the tabetic series also, having come on before the development of the arthropathia. The sign is that of the *tabetic mask*. This peculiar sign was shown to me by Duchenne. It consists in the partial loss of facial sensibility, and in the failure of the patient to properly recognize the situation of the face; he is only conscious of the existence of the posterior portion of the head. In addition, there is loss of taste and also anosmia or loss of the sense of smell. I have often described this symptom, so little known in general, but, nevertheless, very interesting. The history of *maschera tabetica* has been masterly described, as I have had occasion to teach you, by the lamented Miliotti in his remarkable work on tabes dorsalis.

Our patient has his mask, although imperfectly developed. The forehead conveys to him only an unpleasant sensation. These symptoms, as I told you before, preceded the development of the hip trouble.

Before entering into the examination of these arthropathies, let me remind you of a case, analogous to this one, which you will find in the first Vol. of my *Tuesday Lessons* : A man, 40 years of age came to me suffering from an arthropathy of the right thigh. The articulation was, without any prodromic symptoms, suddenly affected while the man was at his work. I was surprised at the rapidity of the onset, and, at the same time, at the slowness of the arthritis which likewise had produced a complete luxation of the joint. The history was similar to that one of the present case. We found the same normal condition of the patellar reflexes, paralysis of the bladder and the same crisis of the lancinating pains.

I have endeavored to show you how we can study these deformities of the thigh by the employment of certain methods. I have for a long time advised the study of the *naked* by the physicians. We must confess that we do not know exactly the proportions and shape of the body, hence when we examine a naked patient we believe that we are able to notice this peculiar deformity at once. We should always begin with this method of examination.

You know that in the language of art by the word *canon* is meant the relations which the proportions of the various parts of the body bear to one another, one of these parts being termed the *module* and taken as the unit. We have thus the *canon* of the Egyptians, the length of the waist being considered as the *module* or unit; that of the Greeks, based upon the length of the palm of the hand ; and then, the ones proposed by Jean Goujon, Leonardo da Vinci, etc. The *canon* of modern times recognizes as the module the height of the head, (22 centimeters as the average) 7 or 8 times of which constitutes the total height of the body.

Mr. Paul Richer, in his investigations on morphological anatomy has proposed an *electric canon* which embraces the advantage of the anthropological *canon* of Topinard and the advantage of that of the artists. The *module* which he uses as a unit of measurement is the height of the head, 7½ times of which makes up the height of the body. The trunk will measure four lengths of the head from the vertex to the gluteal folds ; the inferior extremities will also measure four lengths from the plant of the foot to the anus.

Let us now apply these measurements to the proper interpretations of the present clinical case. This man has lost 5 centimeters of his height since he first began to feel sick. What has been the cause of this? In a healthy man the bi-trochanter line passes along the smaller portion of the anus, and the plane along the superior iliac spine ; the measurement above the first line gives 5 centimeters. In this case the bi-trochanter line is nearer the iliac spine, so as to be confounded with it, and it shows the loss of the 5 centimeters referred to.

Over the back, in a healthy man, the bi-trochanter line passes along the inferior extremity of the sacrum ; in our patient it passes 5 centimeters above the sacrum. The trochanters have been raised, while the iliac bones have decended as a result of the coxo-femoral lesions. We find, at the same time, a transverse dislocation of the trochanters, where an apparent enlargement of the pelvis and the attenuation of the median gluteal fold, place the anus, so to speak, in an exposed condition. The inferior gluteal fold is also diminished.

I will next call your attention, in a few words, to the anatomical lesions that we see after the clinical manifestations we have so far studied. You can judge for yourselves in examining the specimens that

we have collected and placed in our Museum. The tabetic arthropathies are characteristic and their study cannot be separated from that of fractures of the same nature, since we have to deal in both cases with a similar pathological process. There are certain bone lesions which may be called preparatory, and which consist in softening, the results being an extreme brittle condition of the hard substance at the point of lesion. In such instances, the slightest traumatism, a simple effort, may produce what is called a spontaneous fracture. If the fracture does not occur in the continuity of the bone similar alterations on the level of the epiphyses may also result in fracture of these. We must, however, make a distinction in the two instances. In the one case the fracture may be a *fragmentary* one, as in the head of the femur, of which I show you here this example. It is divided into two pieces, one of which remains in the cotyloid cavity. In the other case, there may be what is termed a *molecular* fracture, in which the epiphysis is simply crushed and appears as if it had passed through a grindstone. It is to these bones, with heads so deformed, that I have given the appellation of *drum-sticks* (*baguettes de tambour*). These serious lesions are produced without inflammatory processes and without the production of osteophytes.

Such constitute, at least, the type of simple cases. There are other varieties, and in these we find cases in which we come across vegetations more or less analogous to those of a dry arthritis; but the alterations I have pointed out are the ones which are more or less peculiar to tabetic arthropathies.

To resume: We have here a patient in whom, a month after the appearance of the affection, we were able to recognize tabes, although the condition was only manifest by the existence of arthropathia. Now, it is important to be able to recognise things, at the beginning, and in the present case an early diagnosis would not have been useless.

There are the benign and malignant types of the disease; the last ones are due to the fact that patients continue to walk. I verily believe that if our patient had been advised rest from the beginning, destruction of his articulations would have been avoided.—*Translated from La Semaine Medicale.*

INCOMPLETE LAPAROTOMY WITH INJURY TO THE BLADDER.

By WM. GOODELL, M. D.,
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Gentlemen:—The woman now before you presents a very interesting case. She is 40 years of age, has been married 17 years and has never conceived. Her menstruation has, as a rule, been pretty free, but of late it has become profuse and excessively painful—more and more so every year, until now she suffers prolonged agony each monthly period. Her pain lasts some 48 hours and is so severe that her physician has often given two grains of morphine hypodermically in six hours time in order to allay it. Neither antipyrin nor chloral has any effect whatever upon this pain. She has become morbid over it and is all the time dreading her next monthly period. Further, between her monthlies, she has continuous pain in the right ovarian region, preventing her from working.

On further examining the patient in my office, I found a fibroid tumor in the interior wall of the womb—not a very large one, but sufficiently so to distend the uterine cavity and make the canal patulous. This accounts for the excessive menstruation. She was so nervous that I was not able to make a satisfactory examination; yet my conviction is that the womb and tumor are fixed by adhesions and that both appendages are probably diseased.

The cervical canal might be dilated and the tumor enucleated from its rest; but that is a very hazardous operation. Besides, it would not release the womb and the ovaries from their adhesions. We must, therefore, either remove the womb and tumor, or else the ovaries. If the ovaries are reachable and removable, oophorectomy will be the simplest operation to perform. By this means, the change of life will be brought about; the menstrual molimen will cease; the monthly flux of blood will be checked and the tumor will grow smaller and probably disappear in time. But sometimes the ovaries are wholly imbedded in the tumor and become part and parcel of it; sometimes they are stretched into narrow ribbons on the surface of the tumor and it is impossible to remove them. Then we are driven

to the more serious operation of removing womb, tumor, ovaries and all.

Strange as it may seem, it is much harder to remove a small tumor together with the womb, than a larger one. A sentimental and an enamored poet once wrote, "My wound is great because it is so small." His rival, to show the absurdity of the thought, wrote as a rejoinder: "Then 'twould be greater were it none at all." So you might rejoin: "If it be more difficult to remove a small tumor than a larger one, it should be still more difficult to remove no tumor at all." But while my paradoxical statement contains no rhyme, it contains good reason. For the upward growth of a large tumor tends to convert the cervix into a kind of pedicle; whereas a small uterine tumor generally compels the complete extirpation of the whole womb.

The incision is now being made between the two recti muscles, down to the fat lying above the peritoneum. Since in this case, the intestines lie between the tumor and the parietes, I must proceed carefully to cut layer by layer. Here we come directly upon the peritoneum. Ascitic fluid! Let us see what is the meaning of this. Now I am in a quandary, as to whether the opening I have made is into the peritoneal cavity or into a cyst. This looks like thickened peritoneum, and my fingers pass right down to the womb, but—there is a membrane separating it from my fingers. A small fibroid tumor is palpable in the wall of the womb. I suspect that I have made an incision into the bladder, although the fluid removed, did not have a urinous smell. To verify this, my son will pass the uterine sound into the bladder. I have cut into the bladder, for you can see the sound protruding through the abdominal incision. The bladder is adherent to the abdominal wall up to a point above the umbilicus. Hence I shall have to extend my abdominal incision to a point still higher up, where I can reach the abdominal cavity.

This is a very remarkable condition; and I must proceed with great care, as all landmarks are wanting. Separating the bladder from many omental adhesions and also from the abdominal wall, from above downwards, I find the womb and its appendages, the intestines and the bladder, matted together in an inextricable mass.

Is this opening in the bladder a serious accident? Not at all. The wound is but one inch in length and, from the adhesions to the abdominal wall, is wholly extra-peritoneal. I sew it up with a continuous suture of catgut, which extends through all its coats, and it will be included in the sutures of the abdominal wound. With catgut, I do not hesitate to pass through all the coats of the bladder, because this suture by swelling will effectually fill up the holes made by the needles. Had I used silk, I should have gone to, but not through the mucous membrane of the bladder.

I shall now break up some uterine adhesions, and release some of the adherent intestinal loops. But as for removing either of the appendages, I am afraid that cannot be done without irreparable mischief to the surrounding and adherent intestines. I, indeed, cannot feel the ovaries or tubes, much less define them, unless it be the left ovary, which seems as small as a bean, and lies behind several layers of false membrane, to which is glued an intestine.

The fact is, for the sake of the woman's life, I shall be obliged to stop all further procedures and close up the wound. Such a retreat from an operation, such a defeat, rarely happens, but it occasionally will happen, and I must confess that I always feel somewhat humiliated at its occurrence, for when one undertakes to do a thing, one does not like to fail in the doing of it.

What shall be said to this woman when she comes out of her ether? I shall tell her frankly wherein I failed, but I shall lay stress upon the adhesions which have been severed, so that the bane will have something of an antidote. Then I shall comfort her with the assurance that after the menopause, her sufferings will be lessened. Then again, this operation, abortive as it has been in so far as the extirpation of the appendages is concerned, may set up such trophic action as greatly to lessen the size of the womb and the number of adhesions. I have seen this happen twice in a most remarkable manner; in each case a large fibroid dwindled away, the fixed womb became movable, and adherent appendages apparently became free.

I shall put her upon the prolonged use of ammonium chloride and of corrosive sublimate by the mouth, which will di-

minish pelvic congestion. She will also be supplied with suppositories of watery extracts of opium for the pain of her monthly periods.

Should a drainage tube be used here? No! Everything has been done aseptically; the bleeding has ceased and no cavities containing pus or fluid have been opened, so that a tube is unnecessary. I am always glad when a drainage tube can be dispensed with, as it tends to cause hernia. Then, too, there is the danger that a silk ligature left in the abdominal cavity, may become septic, from the use of a drainage tube, and cause a sinus which may remain open indefinitely unless the ligature is removed. Only a few days ago, I assisted a physician in cutting down upon a ligature which had been thrown around the left appendage and had become septic and consequently a foreign body, on account of a drainage tube. The sinus had remained open for months and the lady menstruated through it, because it led directly to the left uterine cornu. It was removed, and in a week's time, the fistulous track will probably close up. The same thing has happened to me on more than one occasion. I have sometimes hooked out a silk ligature with a long hooked probe. This one could be caught, but not hooked out, as it was too firmly attached to the uterine tissue, so it had to be cut out. To avoid this mishap I now use catgut ligatures, which last long enough to do their duty, but not long enough to become a foreign body.

I now begin to close the abdominal wound, by deep sutures including the peritoneum and taking in a liberal amount of tissue. Care is taken to include the wound of the bladder in these sutures, so as to make it wholly extra-peritoneal, and prevent the possibility of any leakage of urine into the very vulnerable serous cavity. Iodoform powder is dusted over the abdomen and bichloride gauze, together with several thick layers of baked cotton complete the dressing. Iodoform is so repulsive to some patients, that I sometimes substitute boric acid for it.

It seems strange that no history of abdominal inflammation could be elicited in this case, for the woman must have had a severe attack of peritonitis. Probably it was an inflammation of the bowels, and was treated accordingly by her physician. Possibly it may be of specific origin—in which case it might have advanced insidiously, without much constitutional manifestation.

Note.—For three days after the operation, bloody urine escaped from the self-retaining catheter, which was kept in for a week. The patient's recovery was prompt.

EVIL EFFECTS OF CAUSTICS ON THE UTERUS.

Cittadini (*Bullet. de la Soc. Belge de Gynec. et d' Obstet.*, No. 5, 1891) states that a patient, aged 28, was treated in Paris for "hæmorrhagic endometritis." On December 31st, 1890, a stick of chloride of zinc was introduced into the uterine cavity. She was discharged on January 16th in good health; the sound could be passed with perfect ease. The period, due on January 30th, did not appear till February 8th, and the cervix suddenly became contracted. By the end of May the sound could not be passed more than 1½ inch; the stricture seemed to be situated at the os internum. The period continued regular, so that the stricture could not have been impermeable. In the summer of 1891 the patient consulted Dr. Jacobs, of Brussels. She had profuse purulent leucorrhœa, hypogastric and lumbar pains, and painful defecation, but micturition was not affected and the period not particularly painful. There was a tumor to the right of the cervix, and deposit in Douglas's pouch and to the left of the cervix. The sound could not be passed beyond the stricture. Dr. Jacobs's diagnosis was "right perimetritis and cystic salpingitis complicating purulent endometritis with uterine stenosis." Abdominal section was performed; the tumor proved to be a suppurating broad-ligament cyst; the tube was occluded at its abdominal end, and contained muco-pus, but was not dilated. The right ovary had undergone sclerocystic degeneration. There seemed to be total absence of the left tube and ovary. The patient recovered. Cittadini observes that whatever might be the precise relations of the stenosis to the disease of the appendages, it is certain that the cauterization caused the stenosis.—*Brit. Med. Jour.*

COMMUNICATIONS.

REFLEX HEADACHE.*

By F. H. EDSALL.
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In presenting for your consideration the subject of reflex headache, I feel almost as though an apology were necessary for occupying your time with a subject apparently so time-worn and threadbare, yet so pregnant with interest for the general practitioner, as well as for the ophthalmologist, is the subject that I feel confident you will grant me your indulgence for having selected it as my paper this evening.

I am sure that if the physician in general practice could but go over the cases he is called upon to treat, he would find that his aid is more often sought for the relief of headache than for any one ill to which flesh is heir, and I am equally sure he will as often be "put to his trumps" in finding a means of accomplishing this relief as in any disorder of the human economy other than the one under consideration. This arises from an easily understood cause. Headache is such a commonly occurring symptom of many deep-seated and obscure affections that be he ever so skillful a diagnostician the physician is many a time and oft compelled to grope blindly in search of the cause, and in consequence his thrusts at the peace-destroying demon of headache must now and again be widely delivered. Remedies there are without number for headache; the doctor, the druggist as well, is never at a loss for a drug or prescription to relieve the throbs of pain which rack the sufferer's brain, but he who makes drugs his staff upon which to lean will find too often that he has but a broken reed for his support. It is not, I think a rash statement, nor one not warranted by statistics, that the majority of recurring, or of persistent headaches, are reflex in character due to some abnormality in the refractive state of the patient's eyes, or to an imperfectly maintained muscular balance between the sets of little muscles which regulate the motions of the eyes—the much talked about heterophorias of the present day, the muscular insufficiencies of the past, and this being the case, the most that can be hoped for from medical treatment is a temporary obtunding of the pain for which the sufferer seeks relief. The busy practitioner of general medicine is unable to spare the time to go into a prolonged examination of the refractive state of the patient's eyes; in fact it may not occur to him to do so or he may not have the means at hand to accomplish it were he able to spare the time. Naturally, therefore, his mind turns to the pharmacopœia for something with which to relieve his patient, and he has recourse to one or the other of the prescriptions he has found useful in similar cases. This may, if the case be not of reflex origin, end the matter, but if it be due to eye strain, it will prove of temporary benefit at best, and the patient returns so often to the doctor that the case becomes a bugbear, and at last, discouraged and despairing of being able to further aid him, the physician bethinks himself of his friend, the oculist, and to him the patient is forthwith dispatched. If it be eye-strain that has caused the suffering it is soon determined and quickly relieved.

Now, as to the character of headache due to eye-strain. What is there in the structure of the eyes that should cause them to give so much offence in so many of our fellowmen? And why is it that drugs have no power to relieve the aching brain where the eyes are at fault, or at best give but temporary relief. In answering the question may I beg your indulgence in advance if I trespass so far upon your good nature as to cite some points in the anatomy of the eye, which it is necessary for you to bear in mind in order to appreciate the causative action of the eyes it producing headache?

The eye proper, is, as you know, a spheroidal body, which may be compared to a miniature photographic camera, the retina representing the sensitive plate. The distance between the sensitive plate and the dioptric apparatus of the eye is a fixed distance; that is to say, the distance between the retina and the back of the crystalline lens is so related that when the eye is at rest and normal in structure, the focal point for light coming from a distant object will be exactly upon the surface of this sensitive plate, known as the retina. Suppose now, however that this relationship is destroyed through the retina being

*Read before the Alleghany County Medical Society, March 22d, 1892.

situated in advance of the point where it should be; that is to say, through the antero-posterior diameter of the eye being shorter than normal, as not infrequently happens. The refractive power, the ability of the optical system to focus the light, is an invariable power, thus then we have a condition in which the optical system is called upon to focus the image of the object observed upon a sensitive plate in advance of the point at which the system is adjusted to focus it. One or two things must then happen, either we must get but a blurred and indistinct image of what we look at or else the focusing power of the eye must be increased. The eyes have an inborn abhorrence for blurred images, and in a case like the one cited, unknown to their possessor, set about remedying the indistinctness of outline. By means of the mechanism with which the eyes are provided to enable them to see objects close at hand, the mechanism of accommodation, the refractive power of the lens of the eye can be increased by making it more convex. Now, in an abnormal eye, such as I have mentioned, this mechanism is brought into play. The need is for a stronger lens to make up for the diminished distance between lens and retina, and it is thus met. In doing this, however, the eyes part with a portion of their power of accommodation. It would be a work of supererogation for me to describe minutely the mechanism by which this ability to alter the focal adjustment of the eye is accomplished. I will merely recall to you what you already know, that the ciliary muscle, by contracting or relaxing increases or diminishes the convexity of the lens which is attached to it, thereby shortening or lengthening its focal distance. In normal eyes this mechanism is only called upon to enable the individual to see objects close at hand. In eyes that are too short this demand is constant and great in proportion to the amount of shortening. Now, in eyes of this character the eyes are constantly doing, as I have said, a certain amount of the work that normal eyes are only called upon to do at intervals, and if we have superadded upon this, the work necessitated in accommodation, there comes a time when the tired muscle begins to send out plainly-felt reminders of this overtaxed state. So nicely are the eyes adjusted to their work that for a long time they can accommodate for close work and make no complaint, if light and other conditions be favorable, but if the amount of work be exceeded for any considerable time, as in the case where in addition to the work of accommodating for near objects, they must cover up the blurring which would be caused by the shortening of the globe it will not be long before the demand for aid will be felt. It is not so much the continuous work which the eyes are called upon to do which makes the need for assistance felt; that is to say, it is not the work of compensation for the defect in structure, unless this be high in degree, for this would doubtless be unnoticed were it not for the additional demands which civilization makes upon the eyes in the way of close work that gives the fillip which causes the eye to break down, because the ciliary muscle is doing more work than it is capable of doing for any length of time.

In the normal eye there is rest from work when the eyes are fixed upon some distant object, for then the light falls upon the retina focused by the lens at its least convexity. In the shortened eye there is no rest except during sleep, for if the eye is to see clearly at any time the surface of the lens must be to a certain degree more convex than when the eye is normal, which means a demand upon the ciliary muscle. With the intimate nervous connection between the eye and the general nervous system it is not difficult to understand that the constant irritability thus necessitated should communicate itself to the more distant parts and produce the continuous pain which is noticeable in such cases. I have thus far mentioned only hypermetropia as a condition inducing reflex headache from eye-strain. As a matter of fact, any of the refractive errors are equally capable of producing this condition and astigmatism more often even than simple hypermetropia is the cause of cephalalgia. This condition is one in which the cornea, instead of being regularly curved throughout its entire extent is, in one meridian, in consequence of congenital defect, of disease, injury or from operation become differently curved from the other.

Thus, to roughly illustrate, it is as though a ridge traversed it from one side to the other. In consequence of this there is never any distinct retinal image so long as the defect remains uncorrected, for there being different focal distances for

the light coming through the different meridians of the cornea, there is no possibility of focusing both sets upon the same point. The effect of this is to keep the accommodative apparatus in a continuous struggle to bring both sets of rays to a focus, and from the constant struggle weariness soon ensues,—sooner, indeed, than in single hypermetropia, and the headaches follow. This condition may be of a variety of characters. There may be an hypermetropia in only one meridian, or there may be an all round hypermetropia with one meridian more hypermetropic than the other, or the eye may be near-sighted, myopic, in the corresponding way, or lastly, one meridian may be near-sighted, the other far-sighted. Myopia or near-sight may also cause headache, not through its action on the ciliary muscle, for in myopia there is less than the usual demand upon this in using the eyes. The eye is longer than it should be and the lens needs less convexity than it normally would. It is probable that the headache and other symptoms traceable to myopia are dependent upon the disturbance in the relationship which exists between convergence and accommodation. To look at an object close by the eyes have to converge in order to bring the image upon the yellow spot. Ordinarily this is associated with a considerable degree of accommodative action on the part of the ciliary muscle, however in a myope less use of the accommodation is necessary than normally to see objects close at hand, while there is still need for the same amount of convergence. It is this condition of disturbance which is doubtless responsible for headaches due to myopia. Still another abnormal condition of affairs in the eyes may cause reflex headache; this was formly known as muscular insufficiency. It is a lack of balance between the external and internal recti muscles. In converging to look at objects close at hand, there is a good deal of effort put forth by the internal recti muscles. If, as often happens, the internal recti muscles chance to be weaker than normal, the extra effort required to overcome the antagonistic pair of muscles soon causes fatigue, which very quickly produces nervous disturbance.

Having briefly called your attention to the conditions of the eyes which cause headache, I beg leave to consider the signs by which we should be lead to suspect the existence of eye defect.

If the patient complains of increased headache whenever his eyes are used for reading, or if the headache only appears after such use of the eyes; and if the headaches are localized about the temporal or frontal regions, the eyes should be looked to for an explanation, particularly if vision is faulty. So, too, if eyes become reddened easily, or the patient shows a disposition to grow sleepy over his reading, be his book never so interesting. Careful examination of the eyes with proper appliances will generally clear up the diagnosis.

As to treatment, there are but a few words necessary. Correction of the refractive error by proper glasses will usually give marked and quick relief. This correction should be done under a mydriatic, as without this, much of the defect will doubtless be over-looked. Protean nervous symptoms will ofttimes disappear like magic after proper glasses are adjusted, and the sufferer experience a relief before unknown.

If muscular insufficiency exist, this should be corrected by prisms, or by operation, and some attention to the general health is also demanded, as not rarely this is also at fault, and plenty of open air exercise is to be commended. I regret that the short time that has been given me in which to prepare this paper has prevented my making it more thorough and more interesting, but if I have succeeded in pointing out to you the road to relief for any sufferer who may be in your charge, and for whom medicine offers little hope of relief, I shall feel that it has amply repaid me for the work of writing it.—(*For discussion, see Society Reports*).

FRACTURE OF THE NASAL SEPTUM.

Dr. W. J. Clegg has observed two cases of this injury during the past year, in both of which the cartilage of the septum was displaced so as to occlude the left nostril. In the first case, by making four cross-cuts through the cartilage eight triangles were formed, and these were separately fractured at their base. The septum could then be pushed into place and the nostril plugged to support it. At the end of three weeks the result was perfect. *Lancet*, Jan. 2, 1892.

PNEUMONITIS AND ITS TREATMENT.

By A. D. Binkerd, M. D.,
WEST MONTEREY, PA.

While I do not wish to recite the particular treatment of any particular case of pneumonitis coming under my care in a long series of years, it may not be without interest to review the general method by which very satisfactory results have been obtained by me in the treatment of all forms of this very common and too fatal affection. I say too fatal, because readily amenable to proper and judicious treatment when timely applied.

Experience has taught me that many things besides the administering of drugs may be advantageously done for the prompt relief of the patient, and that he who depends wholly upon the effects of drugs in extreme cases is doomed to disappointment.

While it is well to understand therapeutics and the theoretic effects of certain remedies upon the nervous, respiratory and circulatory systems, it is better to know that theory is sometimes diametrically opposed to the facts in actual practice, and still better to dare to deviate from theory when the results justify.

I am called to see a young man who after several days of exhausting fatigue and exposure to inclement weather had a severe chill, loss of appetite, a slight headache, general malaise continuing all afternoon of the day before. After the chill passed off fever began to rise, the breath grew short with acute pain at each inspiration. Breath grew constantly shorter, and the pain more distressing. Exacerbation of fever and delirium was a prominent feature during the night.

On examination I find the temperature 103° to 105° F. Pulse 120 to 140 per minute. Respiration 26 to 30, with suppressed hitch, or a marked tendency to hold the breath at a certain point. On percussion I find marked dullness at the lower portion and exaggerated resonance of the apex of the right or of the left lung as the case may be. Ausculation reveals a peculiar dry pneumonic murmur at this stage of the attack that words cannot describe so well as the trained ear can recognize. All of which possess a pathognomonic value in the diagnosis. Secretion of the kidneys is scant and high colored, the tongue is furred, dry, whitish red and hot; mouth clammy and teeth rapidly accumulating sordes. A hacking cough, dry and resonant, fails to bring up the characteristic brick-dust sputa.

We have here a case of acute congestion and inflammation of the lung—involving only one or both lungs as the case may be. A pneumonitis—liable to become complicated with pleuritic effusion and in time, pulmonary hepatization, uræmic poisoning and death. Three days ago the patient was in vigorous health, full of blood, happiness and hope. His florid complexion and bounding pulse still testify to these facts.

I must act promptly but judiciously. What must first be done? From the median basilic or median cephalic on the affected side I take a full stream of dark blood to the extent of 10, 12 or 16 oz. till the pulse becomes soft and compressible and the patient expresses relief from the acute pain at each inspiration. The skin has grown moist, and venous and arterial tensions have become relaxed. The patient expresses himself as feeling decidedly comfortable and soon goes quietly to sleep.

Look out now for a new danger. But let me say here, "Never try this method of treatment upon a patient of the African race, nor upon an aged patient whose supply of vital fluid is already too scant, nor in a case in which the disease has already passed beyond the first stage. Should you so far forget yourself as not to heed this timely warning, you will surely regret your experiment of reviving the "lost art" of phlebotomy.

Now while my patient has been sleeping a soothing and invigorating sleep for full fifteen minutes, I have prepared in the most scientific manner, as taught to me by the Elder Gross himself, America's greatest surgeon, a thick heavy poultice from linseed meal, thoroughly stirred up with boiling water to the consistency of hasty pudding. This is now spread evenly, a foot square or more, on the double of a piece of cotton cloth a yard wide and nearly as long. The third part is now folded over the plastic mass, over which four to six drachms of tr. opii. camph. is evenly poured. The whole is now held before the fire until it is quite warm. In this state it is applied to the bare skin of

the patient, from the vertebral column behind, around the affected side to a point beyond the sternum. A dry binder is now neatly pinned around the whole and that part of the work is finished. The effect is stimulating to the heart, soothing to the nervous system and decidedly antiphlogistic. In six hours the poultice is renewed and so continued for several days gradually diminishing the thickness or depth of the mass according to requirements of the case. Be exceedingly cautious in renewing and finally removing the poultice that secondary inflammatory symptoms do not supervene. This topical application I have found in my practice of 25 years to be of the utmost importance, and one that never failed me, in its beneficial results.

Is this all that is indicated in this case, since the patient is so comfortable and quiet and the active inflammation probably subdued? By no means. Hence I warned you to look for danger. To win a battle is a glorious triumph, but to utilize the victory calls into requisition the highest type of generalship. To bring your patient out of this prostrate condition by gradual advances, without the occurrence of violent exacerbations of any feature inimical to convalescence, will test your generalship in utilizing a victory and and establish your ability to restore a patient to perfect health by judicious, rather than theoretical medication. What further shall be done in this case?

Scrutinize closely the symptoms. Cardiac sedatives may be necessary. These are readily found in the salts of bromine. Cardiac stimulants and cardiac tonics are indispensable. As to the former, we give the preference to digitalis, in spite of its toxic effect upon the cardiac muscle. Here, theoretic medication is superseded by practical application to particular cases. Why should we seek a result through an agent which theoretically poisons the very organ we wish to stimulate to greater strength? For this we care but little so long as the theory does no practical injury to our patient. Hence, theory must oft stand aside to give preference to the demonstrably practical and useful.

As a safe cardiac tonic we regard the carbonate of ammonium as indispensable in all cases of pneumonitis, especially after full bleeding. Of this we give grs. ij to iij every three or four hours in a f℥ of mistura glycerrhizæ comp. (Brown Mixture of the *U. S. Pharmacopœa*,) or,

℞ Syr. pruni Virginiana .....f℥iij.
" Scillæ omp .....
" Senegæ..... ..... āā f ℥ss.

To this add ammonium bicarb ℥j. Dose a teaspoonful every 3, 4 or 5 hours.

This is a very convenient and eligible form in which to exhibit a cardiac stimulant, to which we attach great importance in the treatment of all cases of pneumonia. The condition of the bowels and secretions generally as well as judicious attention to the proper nourishment of the patient are also of the utmost importance.

Of this class of patients treated on the above described method we have not had the misfortune to lose one case in a score of years.

Young children of whom I have treated many, both after measles and of the common prevailing type of congestion and inflammation of one or both lungs, recover almost invariably under the above treatment modified to suit the nature of the case.

I have never resorted to phlebotomy in the child. The disease generally yields promptly to free application of iodine followed by a poultice topically. Cardiac sedatives or depressants such as tincture aconite root, (Norwood's tincture) combined with syr. pruni Virginiana. Cardiac stimulants and tonics, Foxglove and ammonium according to the nature of the case. Attention to the bowels and secretions is also of the utmost importance.

There is one more class of cases to which the above treatment in general is not wholly applicable. I have had apparently the most hopeless cases in persons over seventy years old recover after long weeks of patient care and treatment from a severe attack of pneumonitis.

When called to see a case well advanced in years, suffering from the symptoms of acute congestion and inflammation of the lungs, such as—fever; rapid, small, wiry pulse; short breath, pain at each inspiration with a sense of increasing stricture around the chest, it behooves us to scan every feature of the case most critically. Upon our wisdom and promptness of action depend the life of the patient. This patient is well advanced in years. His masticatory and digestive apparatus are defective, consequently he is not well nourished. His blood is deficient in quantity and defective in quality. His is

evidently not a case for the lancet, or general bloodletting. But we can apply a cut cup over the seat of the pain, one ounce of blood may be safely taken and with marked benefit to the patient as we have repeatedly proven. Several dry cups are now set over and around the painful portion of the chest. The abstraction of blood and serum from the deeper structures have a marked and soothing effect upon the symptoms of congestion and inflammation. A warm poultice with a full Dover's powder have procured rest and sleep for the patient. The recurrence of pain is effectually controlled by vigorous application of the dry cups upon the back front and sides and renewal of the linseed meal poultice. The application of the tincture of iodine full strength has also a salutary effect. The exhibition of the fluid extract of ergot in 5 doses twice or thrice daily may check or prevent serous effusion of the inflamed tissue. Twenty drops of muriated tincture of iron with two or three grains of quinine in a wineglass of water, twice or thrice daily, soon as it can be well borne is perhaps equally efficacious in preventing effusion and toning up the system.

The syrup of wild cherry with nitre and tr. opii. camph. in teaspoonful doses every two or three hours, combined with the carbonate of ammonium, have a special potency in suppressing cough and facilitating expectoration.

In this class of cases we proceed best with the expectant plan of treatment. All of which means, *watch your patient most carefully*, that you may take advantage of the earliest symptom of change of what ever character, check and control the same by sedative, depressant, stimulant or tonic as the symptoms may indicate.

We have long been in the habit of giving, once or twice daily, one or two or more grs. of quinine sulph. to all these cases whom we could persuade to take the drug. But since I have obtained equally good results in children, to whom the sulphate of quinine could not be administered on account of its bitter taste, I have sometimes questioned whether its exhibition is at all essential to successful treatment. I do not, however as yet feel justified in dispensing with this drug in these cases, until unmistakable proof of positive injury be presented.

Finally, my experience has taught me that pneumonia as generally met with in this part of the country, is promptly amenable to treatment in the very young and on through life to the very aged, and that favorable results bear some relation to the early recognition of the symptoms of the attack, and the promptness with which the symptoms are combated.

In short, the general results depend largely on what the attending physician and the nurse in their combined wisdom and experience tend to make them.

CEPHALHÆMATOMA, WITH REPORT OF A CASE.*

By O. W. WILSON, B. S., M. D.,
LAWRENCE, KANSAS.

The case I am about to report fell into my hands by accident; it is out of my line at present. My practice for two and a half years has been confined to the Indians and employes of Haskell Institute and a few families of friends outside. During this time I have not had a case of obstetrics, and my practice among very young children has been virtually nil.

My desire in reporting this case is to call the attention of this society to one of the most important, and as yet but rarely recognized diseases of very early childhood. Dr. Kelly, of Baltimore, says: "Few men outside of the rank of pure specialists are aware that such a disease as cephalhæmatoma exists." Cases which occur in the practice of the general practitioner are diagnosed and treated by him upon "general principles."

The literature upon the subject is very meagre. In several works upon obstetrics the subject was scarcely mentioned and in none that I consulted was I able to find a satisfactory description of the disease, and if, as Bouchacourt says, the disease occurs once in 250 newly born children, the subject is certainly an important one; for a man with a moderate obstetrical experience will be likely to have one or more cases, the treatment of which demands decision as to their nature and the course to be pursued.

Cephalhæmatoma is a circumscribed blood tumor lying between the periosteum

* Read before the Eastern Kansas Medical Society and Golden Belt Medical Society—joint meeting, Topeka, Kan., April 7, 1892.

and one of the flat cranial bones, usually appearing from a few hours to a few days after birth, gradually increasing in size until it forms a tense round or ovoid swelling.

The commonest seat of these tumors is over one or both parietal bones, but owing to the fact that the periosteum is more firmly united at the sutures the tumor never crosses a suture, but is confined to a single bone. We may have double or even multiple cephalhæmatoma.

The skin over the tumor remains normal in appearance, is painless except as in my case continued pressure caused restlessness; we have no pulsation, no perceptible decrease on pressure nor increase in size when the child cries, differentiated in these respects from meningocele.

In a few days generally—but in my case, weeks—there appears a hard bony rim around the tumor one to two millimeters in height, which gradually becomes more prominent, the tumor receding through this craterous like opening simulating somewhat a depressed fracture of the skull.

The disease is much more common in males than in females, according to Bouchard in the proportion of 34:9. Why of greater frequency among boys? I have seen no explanation.

As to exciting causes there is a difference of opinion; some think it due to intra-uterine causes, while others think it due to injury—however slight—inflicted during birth. The fact is it may occur, as in the case here reported, in natural easy labors where no forceps are used.

Valleix and Paul Dubois have shown that in the newly born the external table of the skull is porous, vascular, incomplete and partially absent.

The diploic vessels therefore are almost exposed, and it is easy to understand how a trifling pressure applied to the yielding head of an infant during delivery may cause the pericranium to glide upon the subjacent bone and by a slight injury to the vascular connections produce a hæmorrhage. The diagnostic points are time of appearance, tendency to increase in size, circumscribed and lateral, non-pulsating, painless and non-reducible.

The prognosis is generally favorable.

The treatment advocated is the let-alone-treatment, the tendency being for the tumor to be gradually absorbed and disappear spontaneously. Where suppuration takes place, incise, thoroughly evacuate and treat antiseptically.

The above I have gathered from different articles upon the subject from which we would infer the diagnosis to be plain, prognosis I have said favorable and treatment dogmatic. How fully all these indications were apparent in my case will be shortly seen.

Mrs. W., multiperæ, mother of four children, all healthy, confined October 7th, 1891, labor was of short duration and as she expressed it the easiest time she ever had.

The physician was called early but scarcely got there before labor was completed. Child male, average size and seems perfectly healthy. The physician came once or twice after and found mother and child doing so well he did not deem it necessary to prolong his visits.

I was called in about the fifth day. The child up to that time had not had a natural operation from its bowels, medicine had been given several times, followed by injections. I was called to correct this bowel trouble. The mother had plenty of milk, she said, but the child was very poorly nourished. Its little legs and arms were very much wasted. It was plain to see that its food was not being assimilated.

I prescribed one-thirtieth grain of calomel every two hours and this not having the desired effect, I increased to one-twentieth grain which after one or two doses, produced quite a free operation from the bowels.

I found it necessary to keep up this treatment giving one tenth grain calomel daily to get its bowels to operate at all.

About the sixth day erysipelas appeared on the right hip, which in a few days had extended involving the thigh, leg and foot respectively, fading from above, as it progressed down the limb. When the disease had about disappeared from the right limb, it next appeared in the penis and scrotum which became very much swollen and very angry in appearance. From here the erysipelas extended down the left limb, thence into the arms, hands and face and small patches on the trunk. This trouble I treated by keeping the affected parts wrapped in absorbent cotton and smeared with oxide of zinc ointment. The scalp was not attacked by the erysipelas.

We made a persistent and stubborn fight against this dread disease, at one time the little one being almost enveloped in cotton and smeared all over with the ointment.

The erysipelas had all disappeared in about four weeks with the exception of resultant abscesses on top of the right foot and middle toe and back of left hand, all of which when ripe were opened, thoroughly cleansed and drained.

Up to the time of the appearance of the erysipelas no tumor had been noticed; this might have been due to the fact that the cephalhæmatoma was developed on the occipital bone and it would not be noticed as quickly there as on the side of the head. About the ninth day was the first time my attention was called to a swelling on the back of the head. The tumor was then as large as a good sized hickory nut, ovoid in shape, quite soft and as I thought somewhat reducible; situated on the occipital bone almost immediately over the posterior fontanelle. I expressed my fears to the family that it might be a meningocele and gave a grave prognosis.

My plan of treatment was to keep a large wad of absorbent cotton over the tumor, held in place by means of a tight fitting cap; this I thought would distribute the pressure and prevent irritation of the skin over the swelling.

As time went on, I saw the case every day. I examined carefully for the bony rim but could not make out any. About Nov. 20, five weeks after the tumor was first discovered, I could make out quite distinctly the bony rim. The tumor was now as large as a hen's egg, tense but painless and no signs of inflammation. I determined now if it did not begin to subside in a few days to aspirate and apply pressure.

On Nov. 25th I was called in haste, the tumor had broken they said but the child was still alive. I went immediately, found the baby sleeping quietly; the tumor had ruptured, saturating the cotton. The character of the discharge was pus mixed with blood. I washed it out thoroughly, applied carbolated cosmoline on cotton and bandaged. In a few days the opening had entirely closed, no signs of the tumor save the elevated bony ridge which gradually closed, which smoothed down and in ten days presented a perfectly normal appearance. The child now is in good condition, bowels regular, is well nourished, has grown fat and with the exception of a little undersize is as healthy looking a child as there is in the family. Surely the little fellow has earned the right to live, and has shown the world that a new born infant can make a good fight against disease.

ÆTIOLOGY, WITH SUGGESTIONS AS TO TREATMENT, OF ACUTE (SPASMODIC?) OBSTRUCTION OF THE STRICTURED MALE URETHRA.

By W. M. L. COPLIN, M. D.
PHILADELPHIA.

ADJ. PROFESSOR OF HYGIENE AND DEMONSTRATOR OF PATHOLOGY, IN THE JEFFERSON MEDICAL COLLEGE; ADJ. PROFESSOR OF PATHOLOGY, IN PHILADELPHIA POLYCLINIC; A. A. SURGEON, MARINE HOSPITAL SERVICE; PATHOLOGIST TO ST. AGNES HOSPITAL ETC., ETC.

For the most part the teaching with regard to acute or spasmodic urethral stricture is, in my opinion, incorrect. As is well known, the almost universal opinion is that the condition depends upon a spasm of urethral circular muscular fibres, which, superadded to an already diminished lumen, causes its entire occlusion. In the writer's opinion, a far more lucid explanation is to be found in applying our knowledge of inflammatory processes in other mucous membranes. To briefly summarize this we recall that there are three distinct stages in an inflammation of a mucous membrane :—1st, hyperæmia or a determination of blood in the submucous capillaries, during which period the membrane is dry and beginning swelling is evident; 2nd, exudation into the submucous areolar tissue of the nutrient inflammatory products, thus giving rise to more swelling and a beginning relief of the submucous tension by intercellular transudation and epithelial desquamation producing rapidly the third stage of free mucous flow, during which the submucous areolar tissues are relieved of their serum and the swelling subsides.

No one can deny that the above briefly outlined facts apply to the mucous membranes of the nose and upper air passages. Why not to the urethra? It will not be infrequently observed that while the so-

called "spasmodic" stricture is active, a similar "spasmodic" condition may be observed in other mucous membranes. The next time you have a so-called spasmodic stricture to deal with, please inquire into the other points, and nine times out of ten, you will find that the mucous membrane of the nose is also swollen as manifested by the "stopped up" head with which we are all more or less familiar. If we stop to think we will see the very apparent reasons for this. All cases of spasmodic stricture of the urethra develop from causes which give rise to congestion or hyperæmia of other mucous membranes, viz:—exposure to cold, intemperance, or, we may have hyperæmia, indeed, a perfectly developed catarrhal process in the urethra, following sexual excesses and in this as is well known spasmodic stricture, so-called, not uncommonly manifests itself. The occlusion of the urethral calibre occurs during the first two stages of the acute inflammatory process, and hence is transitory in respect to time, giving rise to the idea usually associated with spasm. In support of the idea advanced in this article, there are certain therapeutic points of great value. Thus, in the medical treatment of spasmodic stricture, empiricism has demonstrated that those remedies which favor an active cutaneous circulation, (thus indirectly depleting the mucous membranes by abstracting blood from the engorged submucous vascular supply and favoring lymphatic return of the inflammatory transudation) without a single exception are beneficial in the so called spasmodic stricture. In other words, treat the inflammation, acute in character, exactly as we treat similiar conditions affecting for example, the nasal or bronchial mucous surfaces. Secure hyperactivity of the superficial circulation, by hot baths, hot fomentations opium and belladonna, or their alkaloids, and other remedies having similiar physiological actions. Check, if possible, the determination of blood to the mucous membranes exactly as you would in impending laryngitis or acute coryza, in neither of which you would use a bougie, nor should you in the urethra unless the symptoms be urgent and the dysuria demand immediate relief. This, of course, may, in many cases, be positively indicated.

Turning to the surgical treatment or rather instrumentation, does it not bear out the assertions herein made? When passing the bougie or catheter *all* admit that when the obstruction is reached the greatest care must be used. Why? We are told that the spasm will be thus overcome. Is it not equally likely that the pressure slowly displaces the œdema and thus renders the track patulous? If a bougie be introduced and immediately withdrawn, the urine flows freely, is spasm so easily overcome, and does it not recur more rapidly? The œdema returns slowly and if the patient be past the second stage of the inflammatory process, it does not return at all. The same is true if, after instrumentation, the patient be put to bed and medical treatment, as already advised, be fully carried out. Again, we are all too well acquainted with the little effort demanded in this class of cases in order to induce a false passage. Does spasm offer any adequate solution for this? If spasm be added to an already fibroid wall, is it likely to prove a macerating agent? Certainly not. Œdema explains this peculiarity fully; as the swollen and softened membrane pits and pockets with the greatest ease and thus facilities puncture upon the slightest use of force, and when once punctured the very swelling continues obscuring the normal passage and renders re-entrance a practical impossibility, the opening once made, remaining open, just as a trocar puncture in anasarca, which is naught but general œdema. There are other reasons for considering this condition one of acute swelling rather than spasm, but space forbids more detailed review. No reference has been made to the extremely small quantity of muscular fibre in the urethral wall, nor to the fact that sufficient inflammation to induce a stricture must alter the contractibility of the little present. Lastly, it is freely admitted that dysuria due to acute inflammation of the prostate, is caused by the swelling of that organ and not to any imaginary spastic condition. I cannot for a moment assume that there is present anywhere in the urethra sufficient involuntary muscular tissue to offer serious resistance to the urinary flow, while to my mind, a mucous swelling, which, in the glottis is absolutely obstructing under the the most violent efforts of the powerful muscular apparatus of respiration, may afford ample cause for obstruction to the egress of the normal contents of the urinary bladder through an already narrowed urethra.

SOCIETY REPORTS.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Scientific Meeting, March 22, 1892.

Dr. F. H. Edsall read the paper announced for the evening, entitled:

REFLEX HEADACHE. (SEE P. 727.)

Dr. Davis: Taking the subject of reflex headache as a whole, the paper touched on but a very slight cause of reflex headaches, compared to the many other reflex headaches. Indeed, I am not certain if you eliminate neuralgia and organic troubles, such as tumors and the like that produce pain in the head, if there is any headache that is not reflex. We know the stomach when disordered will produce headache, and many different organs in the body will produce headache; possibly many of the headaches we can not trace to the exact organs which are affected are reflex. No doubt, the eye in its impaired refraction causes many headaches. On the other hand there are many defects of the eye, even those mentioned in the paper tonight, which will not cause headache, if the general system is in perfect order. I recall very distinctly a case that came under my observation. A patient of mine suffered very considerably with headache. I believed the liver was the source of these headaches along with the fact that she resided in a malarial country. The patient visited a neighboring city, was taken with the headache, was sent to an oculist, who found what is present in almost every eye, a slight degree of astigmatism; indeed, it is an exception for an eye not to be astigmatic, but this in the course of nature, in a healthy body, can be accommodated, so that it really produces no trouble until the system is out of order in some other way; hence in the case I speak of, they went to an oculist who found there was some astigmatism, put on a glass which thoroughly overcame this, but the headaches persisted. The patient returned and came under my care, and was put under treatment to relieve the liver and the bad digestion, and she never put the glasses on again until another attack of the liver would occur. There was marked astigmatism, but it would not cause the headache. The natural mechanism was perfectly able to overcome it until the system was out of order in other ways. And so it is in many of the forms of refraction of the eye, not only when the general health is impaired, but as you advance in age, as you grow older and can not overcome it, it will give rise to difficulties which you never knew you had. If we would just simply stop at the thought of reflex headaches and stop at the eye, I claim we would stop at a very small proportion of the headaches that are caused from reflex action, and many of the so-called headaches from eye strain are also caused by a disordered system, that if corrected, the eye strain itself would not amount to as much as sometimes we are wont to find in that respect. I would call attention to the fact that it has also been my misfortune to meet with a number of reflex headaches that were caused by the glasses the patients wore, sometimes a perfectly fitted glass. In a very short time the patient, getting rid of whatever trouble existed, finds that the glasses which were fitted at first are entirely too strong, with the old accustomed power of accommodation, and really finds these glasses producing headaches. In quite a number of cases I have had patients remove glasses which at one time fitted them very nicely, and after being removed their headaches were benefited. Of course, this is not to be blamed on the oculist, but certainly there is a necessity for the patient going frequently to see that the glasses are perfectly adjusted, and not depend on the fact that he went once and had them fitted.

Dr. Grube: I am one of those who believe the oculist finds defects in a great many eyes, and I am also one of those who believe the defects are there. It is but a part of our life that we have defective eyes. The defects are there, and are to be met and recognized, and these defects cause headaches in a great many more cases than we have any idea. We sometimes fail to remember that we are only a link of a long chain of man's history and forget that man's eye like the eye of the lower animals, is built for long range. Man used his eyes for long range for many years, and it is only in the last few generations, since the introduction of printing, that man has taken short range for his eyes. We find our eyes are not built for that purpose. A child is sent to school, and if hypermetropia is not there already it is soon developed by the close work, and I think an investi-

gation would show a large percentage of these eye defects to be in school children, showing the necessity of their being corrected, and I would never undertake to treat a case of chronic headache until I had that element eliminated, until I had the patient examined by an oculist, and that part corrected. We have other reflex headaches besides these. We have others which are not reflex, and when the physician has fitted glasses on his patient and dismisses him he has not done his whole duty. One other great element of these headaches, while it is not exactly reflex, is generally blamable on our civilized life, and that is the defective elimination of the uric acid. The great amount of meat diet, of nitrogenous food, must be eliminated from our system, and when the kidneys fail to eliminate this we have the troublesome headaches, which are so very persistent, and which will persist as long as we have the nitrogenized food there.

Dr Allyn: In regard to the correction of the eye for the relief of headaches, we all recognize, of course, that we have a high degree of hypermetropia, or astigmatism. When a person gets to be 20 or 25 years of age, daily accommodations make glasses necessary. Many times that degree of hypermetropia, or astigmatism, may be in the eye of a patient without producing the headache of which we are speaking tonight. There is another fault in which our work is employed. It is in the correction of low errors in the hypermetropia, especially such errors as the optician ordinarily overlooks. If you will notice a paper published in the journals recently you will see that there is an array of cases of headaches where there is the slightest degree of astigmatism. There is one point I might add, that even if the glasses are found unnecessary after the health has been restored, there is yet a field for their employment. If a person has a headache without the glasses every week, but with the glasses, once in two or three weeks, their use is valuable as far as any other remedy. A glass that may not fit perfectly, may not restore perfectly, but oftentimes has its use as a remedy.

Dr. Edsall: In reply to Dr. Davis' first point, I beg to state that I had originally intended to make the paper wider than it proved to be, but I found it getting beyond me in point of time which I had to complete it, and although I had hoped to touch on the other headaches, which I am perfectly well aware exist, I found it would be impossible for me to do so and make the paper at all worth reading. I had good authority for stating that there are but few causes of headaches in children at least. The authority to which I refer is Dr. Seguin's article in Keating's Encyclopedia of Diseases of Children.

In that, if my memory serves me right, he states specifically that there are but two causes of headaches in children, one is eye strain and the other presbyopia. As to Dr. Davis' point in regard to the universality of astigmatism, this is well taken, and I will state that but few cases are on record in which the eyes were not to a degree at least astigmatic. The degree of astigmatism which causes trouble varies very much in different patients. In one patient it will cause a great deal of trouble, while in another patient it will be overlooked for a long time. I have been surprised to find the amount of astigmatism in existence, and work comparatively comfortably carried on. I have a case under my care at the present time, and the patient for years has been able to carry on all the duties of life, and has suffered comparatively little until the age when the hardening of the lens made the astigmatism uncomfortably apparent. Presbyopia always brings out defects of this character, and hypermetropia as well, and if the defect is not felt early in life, it will be felt after presbyopia intervenes.

As to glasses causing headaches, here again I agree with Dr. Davis. These glasses prescribed under mydriatics, in all existing defects of the eye do, for a time almost invariably when first put on cause discomfort to the patient. There are also some patients who are able to adapt themselves with little or no trouble, but if the glasses are not put on until after this effect has disappeared, the difficulty of accommodating them is felt much more severely than it would be otherwise, and this difficulty is sometimes so very apparent as to cause headache in itself; but if the patient persists he will find that this factor in causing headaches will shortly disappear. Dr. Allyn brought up some very interesting points. The low grades of astigmatism sometimes cause more suffering than higher degrees do, largely, because, as Dr. Allyn says, they are overlooked. Higher degrees produce so much discomfort that

resource is soon had to the ophthalmologist for relief, but the low grades, unless careful examination is made, are overlooked time and time again, and the patient suffers without relief until by chance he falls into the hands of some one who recognizes it, and the defect is corrected. Dr. Chisholm, of Baltimore, before the American Medical Association, said that all cases of astigmatism should be corrected. In some cases in my experience, astigmatism will cause no discomfort for at least some time, but in other cases it causes considerable discomfort. It is no quick or easy matter to correct these defects even when time and patience are both unlimited. I am well aware that eye strain is not the only cause of reflex headaches, but I still stand by the assertion that it is the most common cause.

SELECTED FORMULÆ.

ANTI-EMETIC IN INFANTILE GASTRO-INTESTINAL CATARRH.

Tincture musk.....20 drops.
Red wine.....15 grms.
Syrup.....15 "
Infusion salep.....60 "
Sig. Small teaspoonful every two hours.

—N. MANDESTAMM, *La Semaine Médicale.*

ANTISEPTIC SALVE.

The following (*Lo Sperimentale.* No. 18, 1891) is well recommended as an antiseptic salve:

℞ Zinc oxydat.....decigrms. 3.
Zinc chlorat.....grams. 1.5.
Gelatin..... " 20.
Aquæ..... " 30.

METRORRHAGIA.

The following formula is spoken highly of in metrorrhagia:

℞ Ergotin pur.....5 j
Aq. fontan. dist.,
Aq. menth. pip.....āā f3 ij¼.
Syr. cinnamon.....f3 v.
Sig. One to two tablespoonfuls every hour.

—*Gaceta Medica Catalana*, 12, 1890.

TYMPANITES ACCOMPANYING METRITIS AND PERITONITIS.

The following formula is recommended:

℞ Naphthol,
Magnes. carbonat.,
Carb. vegetabil.....āā 5 j
Essent. menth. piperit.....gtt. x.
Sufficient for fifteen powders.
Sig.—A powder to be taken whenever the distention becomes distressing.

—*El Siglo Medico*, p..606, 1890.

ACID DYSPEPSIA.

The following (*Med. Record*) often affords relief in cases of persistent sour stomach:

℞ Sodii salicyl.....5 j
Spt. vini gall.....3 ij.
Solve et adde,
Syr. aurant. cort.....3 j.
Vini albi fort.....3 iij.
M. One tablespoonful before meals.

FOR ODONTALGIA DUE TO ACUTE PULPITIS.

When toothache is dependent upon acute inflammation of the dental pulp, the distressing symptoms to which the condition gives rise may be relieved by introducing a bit of cotton impregnated with one of the following solutions into the cavity of the carious tooth or teeth, after thorough cleansing:

℞ Menthol.....gr. xxxvj.
Chloroform.....f3 j. M.

℞ Cocaine hydrochlorate } āā gr. iv.
Morphine hydrochlorate }
Creasote, sufficient to make a paste of creamy consistence.

℞ Morphine sulphate.....gr. iij.
Atropine sulphate.....gr. jss.
Distilled water.....f3 j M.

—*L'Abeille Mèd.*

TREATMENT OF SCABIES.

Kaposi recommends the following plan of treatment, which has been successfully carried out for ten years in Vienna Clinic, in about five hundred patients each year:

℞ Florum sulph.,
Ol. fagi.....āā 20.0
Sap. vir.,
Axung. porci.....āā 40.0
Cret. alb. pulv.....5.0
M. Sig. Apply once without previous bath and wrap patient in woollen blanket.

In private practice the patient can put on a suit of tight-fitting wollen underwear and go about. Wool has the advantage over linen that it does not soak up the ointment, but leaves it in contact with the body. A bath is to be taken only after the skin has begun to peel. A bath before the ointment makes the skin unnecessarily liable to irritation.—*Deutsche Medizinische Zeitung.*

ACUTE VAGINAL CATARRH.

The following injection is used in acute vaginal catarrh:

℞ Zinci sulph.....5 jiss.
Aq. fontan. dist.....f 3 xiij.
Sig. Sufficient for one injection.

—*Revista Clinica e Terapeutica*, 12, 1890.

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LEADING ARTICLES.

THE TREATMENT OF ENDOMETRITIS.

The treatment of endometritis, at the present time, appears to be going through one of the reactionary stages so common in therapeutics. When Bennett's pathology concerning uterine, especially cervical, inflammation was accepted, and when knowledge of pelvic inflammation was in its infancy, it was the custom to attack endometritis with caustics—potassa cum calce, chloride of zinc, nitric acid, etc.—for the cure both of supposed endometritis and metritis. Later, under the lead of Emmet, the existence of inflammation of the endometrium was denied, the conditions usually classed under that name regarded as due to venous congestion produced by inflammation of the periuterine tissues, or by tumors or certain conditions of remote organs. Under this theory the conditions of the uterus were purely secondary, and were to be improved by the use of treatment directed against the causative factor. According to Emmet this was usually cellulitis. The theory of Emmet did not gain universal acceptance, but it profoundly modified the methods of treatment employed in his country.

The propriety of making intrauterine applications came to be questioned on the ground that the uterine condition was secondary and not the primary disease. Moreover, it was found that intrauterine applications were not without danger—in certain cases peritonitis and even death resulting from them. Experience showed that peritonitis was induced, usually, in cases in which it had previously existed, or when the uterine syringe was used in cases in which the cervical canal was narrow—in these cases uterine colic resulted immediately, at times to be followed by peritonitis. It was found also that frequently intrauterine treatment did

not effect a cure, and that it was always painful and tedious.

Likewise the followers of Hodge held that in cases in which uterine displacement exists, the displacement is the disease and the intrauterine condition but a symptom which will disappear when the displacement is corrected.

The foregoing facts together with the wide acceptance of the theories of Hodge led many practitioners to abandon intrauterine applications. Prominent among them is Goodell, who voices a very general opinion when he says that his results have been better since he gave up the old methods. Those who have abandoned intrauterine applications restrict local applications to the vagina and the canal of the cervix, and pay due regard to the general health. Intractable cases and those inducing hæmorrhages are treated by dilatations and curetting under anæsthesia — care being taken to operate only on uncomplicated cases of endometritis. The recognition of the fact that a large proportion of the cases of endometritis are complicated by salpingo-oophoritis, peritonitis, and pelvic tumors is most important. This was insisted upon by Noble in a paper entitled Minor Uterine Surgery, read before the Philada. Obstetrical Society (*Annals of Gynæcology and Pædiatrics*, Jan. 1891.,) as being the greatest advance made in the subject, from the standpoint of therapeutics. This fact explains the want of success frequently met with in the past, and also many of the accidents following intrauterine treatment.

Apparently the subject of endometritis has reached a satisfactory state. It was recognized as a primary and as a secondary condition—as due to puerperal sepsis, gonorrhœa, and less-defined conditions; as due to uterine and other pelvic tumors; as due to, or at least kept up by, chronic inflammation of the uterine appendages; and as due to certain displacements of the uterus. Recently, no new facts in its pathology have been discovered, but the more general recognition of the relation between endometritis and salpingitis—the former preceding and inducing the latter—caused a reaction in favor of intrauterine treatment, on the ground that if the endometritis can be cured promptly that the salpingitis can be prevented. This reaction can result only in good, provided the teachings of the past are not forgotten. Careful diagnosis is imperative, and only cases of uncomplicated endometritis must be selected for intrauterine treatment. This is the key to success, and it cannot be too strongly emphasized.

The tendency at present is to favor the use of the sharp curette after dilatation under anæsthesia, with full asepsis. This is to be followed by packing the uterus with iodoform gauze, and by applications of Churchill's tincture of iodine or of carbolic acid until a cure is effected. This plan of treatment appears to be a sound one for the following reasons: The use of an anæsthetic permits—first, a more thorough examination and a more accurate diagnosis, with the exclusion of all but complicated cases which guards against "setting up peritonitis" so common in the past; second, a more thorough cleansing of the parts with soap and water, and a more thorough use of antisepsis, which minimizes and practically removes all danger; third, a more efficient use of the dilator and curette, thus enabling the removal of more of the diseased tissue. The uterine canal being dilated first by the dilator and then by gauze, applications can be made to the endometrium thoroughly and with little pain. In this way the duration of treatment can be much shortened, and the chances of extension of the inflammation to the tubes minimized.

A danger to guard against in cases of uncomplicated endometritis, is that this reaction in favor of dilatation and curetting under anæsthesia and with full anti-

sepsis, with applications made later to the endometrium through the crevical canal, may induce venturesome men to use the dilator or curette or intrauterine treatment with the applicator or uterine syringe without anæsthesia and without antisepsis, and in cases of endometritis complicated by tubal inflammation. If unhappily this should be the case the poor success and the disasters of the past will be repeated.

THE VALUE OF MASSAGE HISTOLOGICALLY DEMONSTRATED.

The favorable results from the use of massage are too well-known to need repetition. True, the method has its limitations, and a disregard of these has led to some unsatisfactory experiences, but when judiciously employed it has been used on almost every part of the body with most satisfactory results.

Undoubtedly the greatest value of massage is in the treatment of sprains, luxations and juxta-articular fractures. It has been generally conceded that the beneficial results from massage in these conditions have been due to a stimulation of the circulation and absorption, but its exact action had not been demonstrated until Dr. Castex reported the results of a series of careful experiments to the Society of Biology of Paris, at a recent meeting.

The question Castex sought to answer was as to what scientific explanation could be offered for the results obtained by massage. Castex proceeded to produce a variety of traumatisms upon large dogs, such as sprains, contusions, luxations, etc. The injuries were always made symmetrically—that is similar injuries on two corresponding parts. The one part to be massaged and the other treated otherwise. Both the immediate and ultimate obvious results were carefully studied; and finally, the muscles, both massaged and not massaged were carefully examined microscopically. The nerves and blood-vessels in the region of the traumatism were also examined. The entire course of the experiments extended over a year.

The immediate results of massage were a lessening of pain and a diminution of swelling. The later results were chiefly an absence of ultimate atrophy of the parts. The dislocated shoulder of a dog which had been massaged, ultimately measured 30 centimetres in circumference, while the opposite shoulder which had been similarly injured but not massaged, measured only 28 centimetres.

The histological examinations of the parts yielded most interesting results. The muscles of the traumatized region on the side that had not been massaged showed: first, a dissociation of the muscular fibres, well marked by longitudinal striæ; second, a hyperplasia of the neighboring connective tissue; third, a slight enlargement of the muscular fibres; fourth, the sarcolemma was usually found intact. On the contrary, the muscles of the traumatized region of the side that was massaged were entirely normal. The vessels on the non-massaged side showed evidences of a hyperplasia of their outer walls, and the nerve branches near the injury were irritated and gave evidences of perineuritis and endoneuritis. On the side massaged both arteries and nerves were normal. These results were found to be constant.

Dr. Castex's experiments are of sufficient importance to awaken the interest of every practitioner, especially those who have made use of massage with unsatisfactory results; and they certainly deserve supplementing and extension by other investigators.

A NEW ANTIPYRIN REACTION.

L. van Itallié states, in the *Apotheker Zeitung*, that when nitric acid is added to a solution of antipyrin, and the mixture heated, it will in a little while turn cherry-red. The intensity of the reaction depends upon the amount of antipyrin in the solution, and upon the quantity of acid used.—*Ex.*

BOOK REVIEWS.

LECTURES ON SURGICAL PATHOLOGY: Delivered before the College of Physicians of Philadelphia, 1891–1892. By Roswell Park, A. M., M. D., Professor of Surgery, Medical Department, University of Buffalo; Surgeon to the Buffalo General Hospital; Fellow of the German Congress of Surgeons, etc. Reprinted from the *Annals of Surgery*, Vols. XIII, XIV and XV. St. Louis: J. H. Chambers & Co, 1892.

These lectures upon selected topics in the domain of surgical pathology constitute the Mütter Lectures of 1890–1891, delivered before the College of Physicians of Philadelphia. They may deservedly be called one of the most complete reviews of the subjects treated by contemporary authorities, and fully evince the scholarly attainments of the author. They embrace the facts obtainable from all modern methods of research, and these are presented and elaborated in a manner which gives to the reader a clear, comprehensive idea of the value of the knowledge we already possess, as well as indicating the lines which may be hopefully pursued in future work. Perhaps the most salient point in these lectures is the demonstration by innumerable facts of the absolute necessity of the young surgeon of to-day, who hopes to excel in his profession, to acquaint himself thoroughly with the technique of the modern methods of investigating pathological processes, and to have special proficiency in experimental physiology and pathology, pathological histology, bacteriology and general pathological facts. Perhaps the greatest good that will be accomplished by these thoughtful and well-prepared discourses, will be the stimulus to increased labor in these studies which they are calculated to inspire.

The introductory lecture dwells upon the importance of surgical pathology, and cites the life-work of several eminent surgeons as examples of the necessity of this factor towards success. It then presents the subject of inflammation in accordance with the latest views concerning its rational classification into varieties; following this comes an interesting account of the formation of ptomaines and toxines by bacteria, as well as a definition and classification of them. A notable feature in this chapter is a table showing the variation of hæmoglobin in health and different diseased states. In the second lecture the constitution and formation of pus is ably dealt with, and the name "prophylactic membrane" is suggested for "pyogenic membrane." In this lecture Dr. Park refers to the possible value of the examination of the blood in septic states as a means of diagnosis, and quotes the experience of Eiselsberg, who has reported four cases in which pyogenic cocci were discovered in the blood prior to the occurrence of septicæmia.

The third lecture is a most important one because it deals with "pyogenic organisms," which are divided into "the obligate" and "the facultative." In this lecture the author has gathered the gist of modern research in this direction and presents the subject in a clear and forcible manner. Both sides of vexed questions are freely discussed, although he does not hesitate to advance his personal views when they seem called for. A valuable addition to this lecture is the appended bibliographical index.

The fourth lecture is devoted to the consideration of "The Results of the Absorption of the Products of Wound Infection." The conditions formerly grouped popularly under the terms "blood-poisoning," Park divides into five forms, as follows: I. Surgical fever. II. Intestinal toxæmia. III. Sapræmia. IV. Septicæmia. V. Pyæmia. This lecture is very interesting and well worthy of careful reading, and especially commendable is the restriction of the term sapræmia to toxæmia resulting from infection from a local source *outside* the tissues of the body proper.

The fifth lecture discusses peritonitis, and the tests applicable to antiseptic substances. It contains some admirable suggestions regarding these important subjects which space will not permit us to refer to at length. The method by which an antiseptic should be properly tested is given as practised in the Hygienic Institute in Berlin. It is really the mode insisted upon by Koch.

In the following lecture Park takes up the subject of tetany and tetanus, and gives us the best thought of the day concerning their causes, nature and symptomatology. The review of the various theories concerning the ætiology of these affections is good reading, and is followed by the proof of the specific microörganic causation of tetanus.

The remaining lectures consider in de-

tail many of the diseases in which bacilli have been proven to be present ætiologically. The remarks on tuberculosis are exceedingly interesting, and should be read attentively by every surgeon.

It is impossible to notice at length the many commendable points in Dr. Park's lectures. They are modern, practical, well written, and embrace the best that has been discovered concerning the affections discussed. We can recommend these lectures as a concise and successful endeavor to present a really modern *résumé* of the advances in the field of surgical pathology.

LITERARY NOTES.

—"*The Philadelphia Polyclinic*" is the title of a new quarterly devoted to practical scientific medicine, and is published by the Philadelphia Polyclinic. The subscription price is $1 a year. Each number contains 60 pages. The contents are made up of lectures, clinical notes, favorite prescriptions and book notices. The articles are very good; the same may be said of the typographical appearance.

—The most recent addition to medical periodicals is a monthly entitled *Food*. Each number contains about 60 pages. The subscription price is $2 a year. The present number includes articles by Dr. J. Madison Taylor, Dr. G. M. Hammond, Katherine Armstrong, Ward McAllister, M. E. W. Sherwood and Florence Morse. The journal contains much matter of general interest to the laity, and is illustrated.

—P. Blakiston & Co. announce that they will shortly publish a work on Materia Medica by Dr. Wm. Hale White of Guy's Hospital It will be printed in one compact, handy volume. The American copyright edition will be edited by Prof. Wilcox of the N. Y. Post Graduate School. Dr. White does not do inferior work, so that we are assured that the promised book will be one of value.

OINMENT FOR SYCOSIS.

℞
Acid, tannic. ..... gr. xxiv.
Sodii lactat. ..... 5 j.
Zinci oxidi } .....
Amyli } ..... āā 5 iij.
Vaselini ..... 5 j.
Ft. unguent.
M. Sig. Apply twice daily to the skin carefully shaved.

Rosenthal, *L'Union Méd.*

PERISCOPE.

THERAPEUTICS.

RECENT DRUGS IN MEDICAL PRACTICE.

Dr. Barclay, of Banff, the President of the Aberdeen Medical Society, in an address on the "Recent Drugs in Medical Practice," said,—Dealing first with hypnotics, he found the bromides useless, but of benefit when combined with the tincture of hyoscyamus, in infantile convulsions, menorrhagia, epilepsy. Ten to fifteen grains each of bromide of potash and antipyrin were especially beneficial in epilepsy. Chloral hydrate, if continued for any time, required to be used in dangerously large doses; amylene hydrate, sometimes induced sleep, but was uncertain in its action, and the same result occurred in the use of urethan. Paraldehyde, he found satisfactory, but chloralamide not infrequently induced delirium and disturbed sleep.

Sulfonal had proved the most successful of the hypnotic group without any unpleasant effects, and was especially beneficial in cases of delirium tremens and asthma. Passing next to antipyretics and analgesics he had found gelsemium useless. Antipyrin acted both as an analgesic and an antithermic, but was liable to be followed by great depression, and on this account, he deprecated the existing freedom of its sale by druggists, without the prescription of a medical man. Antifebrin was a valuable antipyretic, but of little use as an analgesic.

Both as a febrifuge, and as an analgesic, Dr. Barclay had found phenacetine most useful, and he adduced several striking examples of its value. The addition of quinine enhanced its effect, and this combination, he eulogized in the treatment of acute rheumatism and herpes zoster. Exalgine has acted well as an analgesic but required careful handling.

The president next spoke of saccharin, oxalic acid and salol. He said saccharin and salol in 5 grain doses and oxalic acid in one-half grain doses, had been successful in the treatment of chronic cystitis. Salicylate of ammonia had proved of value in cases of Bright's disease, by causing the disappearance of albumen from the urine. In phthisis, creosote was not read-

ily borne, but the oil of eucalyptus gave good results, and in the night sweats, he had found the administration of agaric acid and agaricine, very serviceable.

Ichthyol and aristol in ointment did well in the treatment of psoriasis.—*British Medical Journal.*

ETHER AS A STIMULANT AT THE TEMPERANCE HOSPITAL.

A correspondent of a contemporary expresses surprise that at a public meeting at the Temperance Hospital it was announced that the internal use of ether is allowed in the hospital in place of alcohol. We cannot think that there is much to justify this difference. Ether drinking is a vice which has but lately in Ireland assumed grave proportions, requiring special legislation. It is affectation to regard the use of such an agent as morally or physically better than the use of approved forms of alcohol. By all means let the physicians of the Temperance Hospital cure disease—where they can do so equally quickly—without alcohol. Such treatment is instructive, but where some form of diffusible stimulant is needed, to prefer ether to alcohol is scarcely the way to promote temperance. —*Lancet.*

THE ACTION OF ERGOT AND ERGOTINE

Wertheimer and Magnin (*Archives de Physiologie*, 1892, No. 1) publish the results of their investigations upon the action of ergot. They find by intravenous injection of ergotine a notable fall in blood-pressure, preceded and followed by an increase. The simultaneous diminution in the size of the kidney indicates that the fall in pressure cannot be attributed to a vaso-dilatation of the abdominal organs. The direct examination of ventricular pressure shows that it results from an enfeeblement of the cardiac contractions. Following hypodermatic injection, ergotine raises blood-pressure without a preceding depression. When injected into the blood, ergotine produces marked contractions of the stomach; in subcutaneous injection, its action upon this organ is still manifest, but less energetic. A preparation known as ergotinine, given by intravenous injection, raises blood-pressure and slows the heart. In moderate doses, it has no effect upon the viscera.

TUBERCULIN IN THE TREATMENT OF LEPROSY.

Kalindero and Babes (*Revue de Médecine*, 1891, No. 10, p. 817) have reported the employment of tuberculin in the treatment of eleven cases of various forms of leprosy. They found that the general reaction set in about twenty-four hours after the injection. Sometimes a second and a third reaction followed on successive days. Rapid repetition of the injections was followed by cumulative action. In some cases of tuberculous leprosy, small doses were followed by intense and protracted reactions. Local reaction was slight or wanting; exceptionally, it was intense and extensive; it manifested itself by injection of the infiltrated areas and the slow formation of crusts, with desiccation; the general condition was improved, though weakness resulted.—*News.*

THE THERAPEUTIC VALUE OF HÆMOGLOBIN.

In many cases of anæmia where ferruginous preparations are contra-indicated, P. Castellino (*Rev. Clin.*) prescribes hæmoglobin. The following are his conclusions from its use in 15 cases:—

1. The absorption of hæmoglobin is uniformly rapid.

2. It is well tolerated, even by patients having digestive troubles; and never gives rise to symptoms of intolerence, such as vomiting, meteorism, constipation, epigastric oppression, gastralgia, pyrosis, etc.

3. Its favorable actions on the blood is manifested by an increase in the number of the red blood-globules, their resistance, their specific gravity, and their color, their form and diameter soon approaches the normal.

4. Under the influence of hæmoglobin, the general condition of the patient improves, as shown by the return of the appetite, the regulation of the menses, more energetic nutrition, increase of body-weight increased dynamometric force, the favorable influence on the secretion of urea, and the disappearance of various subjective

phenomena of anæmia (erethism dysphagia, gastralgia, palpitation).

5. If the hæmoglobin is not continued until the patient is well, its action is only transitory and soon disappears.

6. In cases of secondary anæmia (carcinoma, tuberculosis, leukæmia, etc.), hæmoglobin is of little or no use, or, at most, the effects are but transient.

7. A daily dose of 0.20 gramme (3 grains) of hæmoglobin is sufficient to obtain a perfect cure.

8. Hæmoglobin is distinguished from other ferruginous preparations by the rapidity of its action, when anæmia is unaccompanied by digestive troubles and when there are no phenomena of intolerance, the latter gives as favorable results as hæmoglobin.

9. Hæmoglobin is pre-eminently indicated in cases of anæmia with serious digestive disturbance, and in the convalescence of fevers and maladies of long duration.—*L'Union Médicale*, December 22, 1891, p. 896.

JAMBUL IN DIABETES MELLITUS.

Dr. H. Hildebrandt, in the *Berliner klinische Wochenschrift*, 1892, No. 1, S. 5, contributes a paper upon the method of action of their now well-known remedy. He believes that it is upon the vegetable diastase and also upon the sugar-forming ferments of the blood-serum, saliva, and pancreatic extract ; an analogous influence upon trypsin and pepsin has not been determined. In diabetes, then, it is useful, because it diminishes the change of starch into sugar in the alimentary canal, and in the tissues the change into sugar of glycogen.

Dr. George Foy, in the *Medical Press*, 1892, No. 2749, p. 29, goes over the botany and pharmacology of the drug. After a careful analysis of the literature he concludes that the record is very fluctuating—marked success attained for very unpromising-looking cases by some physicians, and with the most carefully selected cases and perfectly pure samples of the drug others have failed to get any benefit from it. That the drug has an influence on the conversion of starch into sugar is shown by the experiments of Lascelles Scott, T. A. E. Balfour, and G. Sims Woodhead.

TREATMENT OF SHOCK

Chauvel recommends the following treatment of shock, acording to *La Médecine Hypodermique* for January, 1892: For the purpose of re-establishing the circulation, the patient is put in an absolutely horizontal position and massaged. He is also given alcoholic frictions and subcutaneous injections of ether. For the purpose of maintaining the bodily temperature, the air of the room is well heated, and the patient is surrounded by hot bottles, or placed in a bath of the temperature of 105° or 110°.

Internally, Chauvel administers alcoholic stimulants, such as rum or brandy, in the dose of from 1 to 2 ounces. He does not employ sinapisms or other inconvenient measures. When reaction has been obtained the stimulants are combined with opium for the production o eep. Chauvel mentions the intravenous injection of ammonia, as has been used by Penfold and Tibbis. In cases where shock is prolonged, strychnine, digitalis, and belladonna are to be employed, and electricity may be of great service.

THE PHYSIOLOGICAL EFFECTS OF THE FRANKLINIC CURRENT.

Damian, of Paris, has recently published a study upon the above subject.

By means of his experiments he has conclusively demonstrated, that under positive electrization the heart's action is stimulated, and contracts with greater energy, as indicated by sphygmographic tracings. The temperature, with the same insulation, and with sparks, was increased from .025 to.4 of a degree; while with the simple bath, positive insulation there was an increase in the temperature of .5 of a degree.

The production of urea under the influence of the electro-positive bath was sensibly increased, its weight being elevated from 24.64 to 26.3 grammes. The same insulation with sparks increased the daily total of urea from 27 to 28, 30, 31 and 32.68 grammes. The electro-negative bath was followed by an increase in the volume of urine. In no other form of application was the volume sensibly increased or diminished, while under the same insulation with sparks the amount of

urea was progressively diminished; but less with bath. The phosphoric acid in the urine was decreased under the negative electrization, but more so with the positive insulation.

The alkaline phosphates were diminished in the same proportion, but more so with with positive than with negative; less with bath than with spark. The earthy phosphates were decreased under negative, less under positive electrization.

Thus we see by M. Damian's experiments that the heart's action is stimulated, the circulation improved, the temperature augmented, and the excretions increased. Further than this he has not yet demonstrated; but he believes that there are effects which are as yet undemonstrable. A moral or psychic effect is universally conceded; but the above experiments have clearly proven that the influence of static electricity does not end there, as many are disposed to claim.

METHYLENE BLUE IN NEURALGIA AND MALARIA.

According to the *Berliner klin. Wochens.*, No. 39, Drs. Guttman and Ehrlich have found a decided effect from methylene blue in malaria. Ten centigrammes of the chemically pure drug are given in capsule five times daily. Dr. Immerwhar states, in the *Duetsche Med. Wochens.*, October 8, 1891, that under certain circumstances this same drug, given three times daily in dose of from two to five grains, gives relief in neuralgia, muscular rheumatism, and the nerve-pain of herpes zoster, but not in sciatica. Further trial in both neuralgias and malarious fevers must be made before the true value of the drug is known.

BROMIDE OF POTASSIUM IN CERTAIN SYPHILITIC AFFECTIONS.

Dr. Augagneur, (*Deutsche Med. Zeit.*, Jan. 7, 1892.,) has found that in certain syphilitics, especially women, there often appears about the sixth or seventh month of the disease a dyspnœa which may have come on suddenly or only after a gradual onset of some eight or nine days which may lead to almost complete aphonia. It is not alway a permanent but at times an intermittent aphonia, and for this reason the author concludes that the erythema of the mucous membrane of the larynx, which is usually the only thing found on laryngoscopic examination, can not be the sole cause of the alteration in the voice. In the belief that it is due more to a disturbance of innervation, bromide of potassium has been successfully employed in conjunction with iodide of potassium, as follows :

℞ Potass. Iod .....10. 0 grammes.
Potass. Brom.....20. 0 "
Syr. Aurant, Cort. .....100. 0 "
Aquæ Dest.....200. 0 "
S. A tablespoonful twice daily.

ACTION OF THE BROMIDES.

Féré, before the Société de Biologie at its meeting on September 17, 1891, expressed his belief that the results obtained by using bromide of strontium, instead of bromide of potassium, in treating epilepsy, are equally good, particularly after the potassium salt has been taken for some time, although the same doses are employed as of the potassium salt.

In regard to the assertion that persons taking the bromides rarely become tuberculous, Féré finds from experiments on guinea-pigs and rabbits that the administration of these compounds to animals who were inoculated with tuberculosis distinctly increased the progress towards a fatal issue.—*Revue Thèrapeutique Mèdico-Chirurgicale*, November 1, 1891.

THE ACCUMULATION OF BROMIDE OF POTASH IN THE DIFFERENT TISSUES.

Féré and Herbert, of Paris, have recently made some interesting experiments on this point and transmitted their report to the Société de Biologie. An epileptic, aged 64, began December 18, 1890, with 5 grammes daily of potassium bromide, then took six grammes daily, and, beginning October 13, 1891, 7 grammes daily until October 20, 1891. On October 23d he died with pneumonia. The various issues of the body were then carefully examined and found to contain, per 100 grammes, the following quantities of the salt: brain, 0.073; lungs, 0.082; liver, 0.104; spleen, 0.133; kidneys, 0.10; pancreas, 0.043; muscle, 0.062; cartilage, 0.041; bone, 0.087.

A PRACTICAL SUBSTITUTE FOR COD LIVER OIL.

Dr. G. H. Pierce, M. D., writes in the *New England Medical Monthly:*—Since 1889 *Linseed Oil in Emulsion* has been in constant use in my practice. I had found great difficulty in getting many of my patients to take cod liver oil in any form, and when linseed oil in a platable form was brought to my notice, it required but a few trials to establish its merits.

The preparation known as Linonine is a perfected emulsion, and superior to the Mistura Ol. Lini as first presented to the profession.

The writer was probably one of the first physicians in Danbury to make extensive use of the linseed oil emulsion, and did so alone on the merits of the preparation.

Cod liver oil is of course invaluable if the stomach will tolerate it, but there are so many complaints from eructations that it has to be abandoned, often when the system positively demands an oil food. Linonine is borne by a weak stomach, and any after-taste which may arise is only that of the flavoring matter, which is not at all objectionable. The oil is so finely divided in the process of emulsification, and the other ingredients so thoroughly mixed that nothing except a pleasant taste is noticed.

Linonine is indicated in all cases where cod liver would otherwise be used, and in some cases where the latter would not be. We would not think of prescribing cod liver oil in acute bronchitis; linonine, the linseed oil emulsion, is most useful in this affection, for combining the anodynes and sedatives, morphia and choral, where pain and inflammatory conditions exist, a perfect remedy is produced. No severer test of the worth of a pulmonary medicament could be found than those presented by the various forms and stages of La Grippe. During the great outbreak of this disease in the winter of 1889-90 I prescribed linseed oil emulsion with and without chloral and morphia, according to the degree of acute inflammation and amount of coughing, and obtained the very best results from its use. The very tight feeling in the bronchial tubes is moistened and loosened in the very first stages of bronchitis, and in the last stages the secretions are favorable modified.

Formerly, linseed oil was used only as a laxative, or cure for piles, or applied externally in cases of burns. The hindrance to internal use was owing to its disagreeable taste, which has been most beautifully overcome. Linonine it must be remembered is more than a simple oil—it is a compound pharmaceutical product—consisting, in addition to the oil, of hypophosphite of iron, oil of eucalyptus, oil of gaultheria, Irish moss, marshmallow, glycerine and dilute hydrocyanic acid.

In a case which I have at present, of annoying reflex cough, there being a tendency to vomit at each paroxysm of coughing, which has necessarily left the stomach in a delicately receptive condition, I prescribed linonine, and the patient at once remarked on the platableness of the preparation. Now, it wa san oil emulsion, and was not disagreeable to a delicate stomach.

How few, with such a combination of stomach and cough, could tolerate a cod liver oil emulsion at such a time. In ninety-nine cases, out of a hundred the returning taste of the fish oil would set the patient against it. Not so with the linseed oil. There is no taste to return to disgust the palate, and the oil is so thoroughly emulsified, and of so tempting a flavor, that the patient anticipates the next dose with a relish. Indeed, it is more difficult to keep one from "downing" the entire contents of the bottle, than to get him to consent to take in moderation the prescribed dose. The Doctor is receiving daily, literature and samples "useful in the treatment of LaGrippe;" the field is a prolific one, and every remedy is the best. From my experience with linonine, combining as it does nutritive, alterative and sedative properties, I am satisfied that its efficiency will not be long in being universally proven.

NITROGLYCERIN IN THE TREATMENT OF REYNAUD'S DISEASE.

Cates (*University Medical Magazine*, vol. iv. No. 5, 1892) reports a case of Reynaud's disease—that is, symmetrical gangrene of the extremities—in which great relief was obtained by the injections of nitroglycerin, commencing with $\frac{1}{100}$ of a grain, and gradually increasing the dose up to $\frac{1}{30}$ of a grain, three times a day. The patient grew better, sores healed, and pain disappeared like magic, so that the routine duties of life were again made possible.

THE EFFECTS OF SULFONAL UPON THE CIRCULATION.

The conclusions arrived at by Dr. Sgobbo Francisco, of Naples (*Annali de Neorologi*, Fas. II, 1891), are:

1. That sulfonal is a good hypnotic.

2. That given in doses of 3 grammes it exerts an influence upon the heart and blood vessels, reinforcing the systole aud increasing the vascular tone. This action upon the blood vessels is not continuous, for after a certain time there is a dilatation, and a progressive loss of elasticity, beginning first in the vessels of the brain, then extending to the periphery.

MEDICINE.

MOTOR PATHS OF THE SPINAL CORD.

Rossolimo (*Arch. de Neurologie*, Nos. 64 and 65, 1891) has published a long series of experiments upon hemisection of the spinal cord, the cord often being hemisected on opposite sides at different levels and at different intervals of time. The author considers that the most important result he has made out is that when in an animal submitted to hemisection of the spinal cord the voluntary movements of the paralyzed extremity come back to their primitive state, this is always brought about by the supplementing of the nervous paths cut by the operation by other paths running on the opposite side of the spinal cord and intact in it throughout the whole of their length from above to below; that is to say, from the crossing of the fibres in the pyramids of the bulb down to the level of the motor roots containing the nervous fibres for the posterior extremity, where they pass immediately from the side of the lesion.—*Brit. Med. Jour.*

A CASE OF SYMMETRICAL GANGRENE OF THE FEET.

Mr. W. H. Brown reports the following case: The patient had always enjoyed good health up to ten weeks prior to admission to hospital, when he was seized with violent and persistent diarrhœa, accompanied with abdominal cramps and surface lividity. This was followed by collapse, which continued for two or three days, during which time he complained very much of pain in both feet. His body lost its livid hue, but the skin over the anterior half of both feet remained discolored and cold. It was necessary to administer full doses of opium to control the pain. At the end of six weeks a line of demarcation formed and the pain lessened. On admission the granulating surface at the junction of the living and dead tissue was of an unusually brilliant pink color, and the discharge offensive. The heart sounds were normal and vessels healthy (both anterior and posterior tibials could be felt at the ankle); the temperature each night was 100° to 101° F., falling each morning to 98° or 99°. The process of separation was very slow. Three months after entrance, the discharge having become sweet and the temperature normal, the right foot was amputated, the ordinary incision for Syme's operation being used. The bones of the tarsus were found to be softened and infiltrated with pus, the cancellous tissue being replaced by soft cheesy material. The stump healed rapidly. The left foot was removed in similar manner, and also resulted in a firm stump. The patient was discharged four weeks after the second amputation. In ordinary senile gangrene, waiting till the parts have separated, or amputation far above the seat of disease, has been, and is, the method followed by the majority of surgeons. In the present case, when the gangrene was in every respect save one like an ordinary case of senile gangrene, the parts were removed, neither waiting for separation nor amputating above the disease. The result justifies the procedure, as the patient was saved many weeks of waiting, and only suffered the loss of those parts already destroyed by disease.—*Lancet.*

TUBERCULOSIS AND ERYSIPELAS.

Dr. J. Morton, of Mussoorie, describes some experiments in which he has been successful in curing animals charged with the tubercle bacillus by inoculations with the tubercle of erysipelas (Fehleisen's). Extended observation may yet be found to prove that in the erysipelas bacillus or its products we have the cure for tuberculosis. These experiments are the result of six months' labor, and augur a hope, even after the failure of Koch's treatment, that in his trail other observers may yet make a discovery.—*The Indian Medical Record*, October, 1891.

GONORRHŒAL RASHES.

Two articles on this subject are epitomized in the *Deutsche Medizinal-Zeitung* for November 12. One of them, by M. Leon Perrin, was published in the *Annales de dermatologie de syphiligraphie*,, and the other, by M. Voituriez, appeared in the *Journal des sciences médicales de Lille.* Of genuine gonorrhœal rashes—*i. e.*, rashes not due to the ingestion of some drug—M. Perrin has been able to find only twenty cases on record, and to them he adds two that have come under his own observation. Dr. A. Blaschke, who summarizes M. Voituriez's article, says, that he himself has never seen a case. According to Voituriez, the gonorrhœal exanthem resembles that of measles or that of scarlet fever and is followed by desquamation, whereas, a copaiba rash is more like urticaria or a polymorphous eruption. The gonorrhœal rash may last for a week, and is usually generalized and often accompanied by fever and angina.

HYPNOTISM AND ELECTRO-MAGNETISM.

In delivering the Saturday evening address at Toynbee Hall last week, Mr. Ernest Hart took Hypnotism and Electro-Magnetism for the subject of his discourse. He traced the history of hypnotic and mesmeric practices through ancient European and Asiatic nations, as well as the existing aborigines of Africa and among the demoniacs of the Middle Age. Sketching the decent of the doctrine of animal magnetism from Paracelsus (who regarded it as an emanation of the divine fluid) to Hausen, Mesmer, Puysègur, and Faria, to Grimes, Darling, and Elliotson in America and England, he endeavored to disengage the facts from the delusions and impostures with which the subject always has been, and is still surrounded. He showed that the term "animal magnetism" is a delusion, an example of the common practice of using a word which has no meaning to explain facts which are not understood. From the results of personal investigation of many years' observation, and of experiment on animals he showed that all the external causes commonly alleged to be efficient, such as the will of the operator, or any sort of fluid—magnetic, vital, or psychical—might be successively eliminated without in any way affecting the success of the result. Hypnotism and all its aliases—mesmeric, electro-biological, or "magnetic"—he showed to be subjective; second sight, clairvoyance, and thought transference to be impostures or self-deceptions. He then discussed the remarkable effects of suggestion on the hypnotic, which transcended many of the marvels and impostures of the stage-impostors who abused and imitated them. Referring to the long series of efforts to render hypnotism of therapeutic value, although they were old and conducted by a number of abel men, he pointed out how meagre and valueless they were in the ablest hands, whether of Bernheim or Charcot, and how little promise there was in them. Finally, he referred to the evil results of hypnotic practices in the hands of unscrupulous or unskilled persons, their mischief on stage performances, and called for their prohibition in such hands in this as in Continental countries. The address was received with profound attention and frequent applause, and has been widely commented on with approval in the press.—*Brit. Med. Jour.*

THE PARASITE OF IRREGULAR MALARIAL FEVERS.

Dr. M. W. Sakharoff (*Ann. de l'Inst. Pasteur*, July 25th, 1891) has a note on certain parasites occurring in the blood of patients suffering from irregular malarial attacks. These are different from those found in the "regular" fevers, being small pale bodies enclosed in the blood corpuscles, endowed with amœboid movements, and assuming a round shape when at rest. In course of development this amœboid condition undergoes the following modifications: Pigment granules appear, mobility is gradually lost, and the form becomes round. The granules unite into a mass at one side or in the middle of the parasite, and a nucleus previously visible can be no longer seen. During this time the parasite increases in size but always remains smaller than the blood corpuscle, of which a large portion is unoccupied. After a time fission commences, and this may be observed in blood drawn from the finger (the parasite described by Marchiafava in connection with regular malaria only divides in the internal organs and not in shed blood). This fission takes place in the interior of the corpuscles, after which the segments, from four to sixteen

in number, escape, and either remain free or become enclosed in leucocytes. In these latter, further development very rarely occurs. This is the normal life history, but two modifications may be at times observed: (1) Sometimes the course is more rapid and fission begins before pigment formation; (2) at other times new crescentic forms appear, and the disease assumes a chronic course. This is a highly interesting form, and one about which there has been some controversy. The author believes (1) that in cases in which these occur the fever seldom assumes a recurrent form. He considers (2) that usually these crescentic bodies are not developed, although at the commencement the amœboid parasites may be present in enormous numbers. He states also (3) that these crescentic bodies may be found in the blood of patients suffering from an irregular attack, but are very seldom seen in the course of a regular malaria. These crescents change gradually into oval or round bodies. Generally also, as the author has proved by actual observation, some of these round bodies develop a number of motile filaments, at least in preparations outside the body; finally they disappear and leave no trace. Attempts to cultivate the parasites have all failed. Fowls also showed themselves insusceptible, and the parasite has not been found in their blood although these are said to suffer from malaria. In the blood of some geese, however, affected in an extremely malarial district of the Caucasus, the author found a hitherto undescribed spiral parasite. He is making further researches on this parasite.—*Brit. Med. Jour.*

THE TWO TYPES OF AORTIC INSUFFICIENCY.

In a critical review of the subject of aortic insufficiency by Dr. Easton Lyon (*Gazette des Hôpitaux*, June 13, 1891), stress is laid upon the fact that there are two rather distinct types of this order which ought to be recognized. These are the endocardiac type and the aortic type. The former affects especially young subjects, it most often follows rheumatism, it may remain stationary for years, and it is before all an affection of the heart. The latter affects older subjects; it is related to arterial sclerosis, and is especially a disease of the arteries. While these two types may not always be distinct, and may even run together, yet the pathological and clinical difference is a distinct and real one.

Taking up the subject of the endocardiac form, Dr. Lyon goes over, first, the question of its etiology. Here the two great factors are trauma and infection, the infection being usually rheumatic fever.

Rheumatism, according to the French statistics, affects the heart's valves in about one-third of all cases, and in about one-third of these the aortic valves are attacked. The infection of typhoid, scarlatina, and erysipelas sometimes acts similarly. Taruma is a rare cause. Three quarters of the cases are males and most of these are adults. The lesions of the valves are those due to acute and to chronic endocarditis. Under the former head we have ulcerations, vegetations, and valvular aneurisms; under the latter a reticulated condition, rupture, and valvular aneurism. The aorta is healthy, but the heart is dilated and hypertrophied.

It is not necessary to go into the detailed analysis of the symptoms as given by Dr. Lyon, since they are familiar to all. The capillary pulse, the tonsillar pulse, and the retinal and pharyngeal pulsations, are curious and striking symptoms sometimes observed in this type.

Aortic insufficiency of cardiac origin is thought to be the form of heart disease most compatible with long life, provided the patient has no other valves involved, and does not have to lead a laborious life. Cures have even been claimed by Potain and others. Sudden death is rare, though perhaps more frequent than in mitral disease. It may be due either to embolism or heart failure.

In the matter of treatment, Dr. Lyon asserts that digitalis is absolutely contra-indicated, and that iodide of potassium does no good. Hygienic measures and opium are the only things recommended, and if this represents the limits of French therapy one must consider it rather barren.

Aortic insufficiency of the arterial type is really but one manifestation of a generalized arterial sclerosis. It is caused by the infectious toxic agents, and diathetic poisons; hereditary influence is also a factor. The valves are indurated and sclerosed, the orifice dilated, the heart hyperthophied. The aorta is always dilated

and incrusted with atheromatous plaques. There is excessive arterial tension increase of dullness at the base of the heart, a double murmur, and often local pain on percussion. The subjective symptoms are much more varied and severe than is the case in the cardiac form ; anginal attacks, vertigo, syncope, dyspnœa, palpitations. Death more often occurs suddenly from heart failure, cerebral hæmorrhage, or from uræmia.

The treatment here recommended is iodide of potassium, trinitrine, caffeine, milk diet, and intestinal antisepsis.—*Med. Rec.*

PANCREATIC DIABETES.

Rendu (*La Semaine Medicale*, March 25, 1891), has described the varieties of glycosuria. Sometimes glycosuria is transient; the urine of certain individuals, over-fatigued physically and especially mentally, from time to time contains traces of sugar. Such glycosuria disappears after some days of rest and seems to have no serious significance. It is the same with the glycosuria observed in some acute conditions, as in poisoning by the vapors of charcoal. In the cases indicated, the glycosuria is probably a result of congestion of the bulb, and is not true diabetes.

Diabetes is probably always of nervous origin. Rendu is convinced that whenever glycosuria exists, the bulb is involved. In this category belong the cases of Claude Bernard, in which the diabetes was the functional expression of a lesion of the medulla or the fourth ventricle. Leudet has reported cases of basilar meningitis with glycosuria; in some cases of diabetes Luys has post-mortem found marked congestion of the floor of the fourth ventricle; in still other instances, tumors have been found in the same region.

The most important and the most frequent form of diabetes is constitutional or diathetic, of which there are two varieties: adipose or gouty, and thin and pancreatic. The diabetes of the adipose or gouty is hereditary; it may continue for years without impairing the general health. It frequently alternates or coincides with other articular or gouty manifestations, or with such conditions as external hemorrhoids, eczema, migraine, or epistaxis; the patients are also often asthmatic. Some marked differences exist between these two types of diabetes. Gouty diabetes is insidious in onset; thirst may be absent; furuncles may appear, or an existing wound cicatrizes slowly; there may be itching of the genitalia; there are flashes of heat, or there is insomnia. The quantity of the urine passed during the twenty-four hours does not usually exceed five litres (five quarts) with a maximum of from thirty to forty grams (from an ounce to an ounce and a quarter) of sugar per litre; emaciation does not usually result; finally, the quantity of sugar in the urine is readily controlled by treatment. Each year after a sojourn at Vichy or at Carlsbad, the sugar completely disappears from the urine, to reappear at the end of some months. Such patients, however, may live for many years without accident, save perhaps itching or an outbreak of furuncles. They must, however, be regarded as invalids, as in them surgical or medical disorders may assume a grave character and rapidly terminate fatally. In these cases there is nearly always a psychic cause for the condition—a strong emotion, or financial loss. The nervous system seems to play an important rôle. In some cases bulbar manifestations are seen, as, *e. g.*, albuminuria or polyuria, alternating or coinciding with the glycosuria.

The manifestations of pancreatic diabetes differ from the preceding. The patients are neither diathetic nor predisposed; suddenly, without apparent cause, without prodromes, grave diabetes is evident. Polydipsia associated with polyuria develops in the midst of apparent health, and a condition pronounced debility is soon reached. In some patients intestinal disorders, paroxysmal diarrhœa, ill-defined chronic enteritis, with rapid loss of strength, usher in the disease. The stools may contain free fat. The onset may be marked by cerebral disturbance, such as vertigo, somnolence or insomnia. Premature and absolute impotence not dependent upon general paralysis or locomotor ataxia should create a suspicion of diabetes. The patellar reflex may be abolished. In addition to the excessive thirst and appetite there is an unusual sense of fatigue, at first physical and soon intellectual; the patient becomes apathetic; in some cases moral depression may be the first indication of diabetes. While in the diabetes of the gouty or adipose the quantity

of urine rarely exceeds three or four liters, in pancreatic diabetes it is often much greater. The degree of azoturia is proportional to the degree of glycosuria. Trophic disorders are prominent. Lesions of the retina are observed; the teeth and hair fall out; finally, a series of digestive disorders arise that lead to rapid emaciation. Tuberculosis frequently develops.

Lesions of the pancreas were long ago observed in cases of diabetes. In five cases of nine, Frerichs has noticed atrophy of the pancreas; while the lesions described have not in all cases been identical, they have all been associated with destruction of the organ. Atrophy is frequent; a sclerotic condition, either pericanalicular or perivascular, is often found. In some instances the volume of the pancreas was normal, but the glandular element was completely altered or had disappeared. In dogs, extirpation of the pancreas has been followed by diabetes with polyuria, glycosuria, and emaciation.

It seems, then, that a pathological relation exists between the condition of the pancreas and diabetes—a relation, however, the details of which are not yet understood. It is also probable that the polyuria and glycosuria are more common as a result of lesions of the fourth ventricle. The prognosis of pancreatic diabetes is much less favorable than that of diabetes in the adipose or gouty. In the pancreatic form therapeutics is entirely powerless; slight amelioration may be obtained from the administration of opium, antipyrine, arsenic, lithium, or the bromides; but the glycosuria cannot be made to disappear completely. In diabetes of the adipose, medication is speedily successful.—*News.*

DISSEMINATED SCLEROSIS.

C. Zimmermann (*Archiv. of Ophth.*, vol. xx, No. 3, 1891) reports a case which he diagnosed to be disseminated sclerosis mainly from the association of partial atrophy of both optic discs with spastic paraplegia. The man was a painter, aged 26, and first came under treatment in 1886. He had suffered from dimness of vision in the right eye and diplopia for several weeks. V. R.=$\frac{15}{70}$; V. L. =1. Visual fields and perception of colors normal. Pupils equal; irides acted normally with light; the temporal two-thirds of both discs were perfectly white; all the vessels were crowded to the normally colored nasal third. There was crossed diplopia, increasing on movement to the left, from paresis of the right internal rectus. At the end of two months' treatment with strychnine and potassium iodide, V. =1. in each eye, diplopia, absent, ophthalmoscopic appearances unchanged. In March, 1891, the patient displayed the characteristic signs of primary spastic paraplegia, including the abdominal muscles and to a certain extent those of the right upper limb. In the latter there were paræthesiæ, a large anæsthetic patch on the arm, and partial anæsthesia over much of the ulnar nerve territory. Speech was hasty. Vision remained normal; atrophy of discs unchanged. Oppenheim first directed attention to optic nerve atrophy in spastic paraplegia. In his work on the subject he showed that disseminated sclerosis presents the clinical features of primary spastic paraplegia much more frequently than is commonly recognized, and that the affection of the optic nerve is the one sign that may ensure the diagnosis. Uhthoff has found that in consecutive atrophy of the optic nerve many of the axis cylinders escape lesion. That fact has been confirmed by Oppenheim, and probably explains the absence of visual impairment.—*Brit. Med. Jour.*

SURGERY.

THE PRESENT STATUS IN BRAIN SURGERY, BASED ON THE PRACTICE OF PHILADELPHIA SURGEONS.

In the *University Medical Magazine*, Oct. 1891. Dr. D. Hayes Agnew presents a paper containing fifty-seven cases of trephining for traumatic epilepsy. Forty-six of the patients were males, four were females, and in seven the sex is unknown. Of these fifty-seven cases, forty-one recovered from the operation, four died, while in the remaining twelve the result is not given. The ages varied from seven to forty-nine years. The mortality did not exceed seven per cent. Thirty-two experienced temporary benefit; nine obtained no relief; four passed out of observation; four were operated on too recently to ex-

press any opinion ; four were cured, and four died. The author concludes that traumatic epilepsy is practically incurable by surgical operations, and that a considerable number of such cases had better be relegated to the domain of pure medicine. But he believes that a certain number of patients in this class, on whom internal remedies have no controlling influence, may with propriety be operated on as a palliative measure. He assumes that surgery is responsible for the great majority of traumatic epileptics, and the old doctrine that depressed fractures of the skull without symptoms required no operative interference, in his opinion, has been the cause of very many of the unfortunate sequels of head injuries.

ANTISEPSIS FOR THE HANDS.

The steps of Dr. McLean's process are: 1. The hands, having been thoroughly cleansed, are to be held for two minutes in a solution of the permanganate of potash, 5 parts to 100, after which the hands should be rinsed in clear water. 2. Hold the hands for one minute in a hypophosphate of soda solution, one ounce to the pint. 3. While this is being done add the oxalic-acid solution, ½ ounce to the pint of water. This causes a double chemical combination, whereby an oxalate of sodium and sulphur dioxide are formed, which have powerful decolorizing and disinfecting properties. The permanganate stains are promptly removed from skin and nails; after again rinsing the hands in sterilized water they are ready to come in contact with either an exposed serous or a lacerated mucous membrane. The hands may then be regarded as both surgically and obstetrically clean.—*Journal American Medical Association.*

INTERNAL STRANGULATION.

Mr. Arbuthnot Lane in a recent paper on the varying modes in which a strangulated loop of bowel reacted to the constricting medium. He narrated two cases of strangulated hernia, remarkable for the extreme sharpness of the constricting edge. In one, the loop of bowel had passed along with a piece of omentum through a small aperture. The bowel in the sac was not much congested. The distal portion of the loop was shielded from the sharp constricting margin by the omentum, but more than three-quarters of the circumference of the proximal portion of the gut had been subject to its pressure, and had by a process of ulceration been deprived of all but its peritoneal coat for a breadth of nearly one-eighth of an inch. This coat appeared very thin, but was not perforated. Mr. Lane invaginated the damaged portion of the circumference of the bowel into that beyond and retained it with sutures. The man recovered. The second case was one of reduction *en masse*, with a constricting medium precisely similar to that in the preceding case, but both proximal and distal ends of the loop were so deeply ulcerated as to leave only the peritoneal coat along the line of constriction; and though there was no obvious perforation, the fluid in the sac and that in the abdominal cavity in the vicinity of the hernia smelt strongly of fæces. The loop was excised, and the ends of the bowel approximated by Senn's method. Symptoms of peritonitis, which were only local before the operation, soon became general, and death ensued on the following day. In this, as in the first case, the loop of bowel showed very little change except at the point of constriction. It would have been impossible to have performed the operation at all, owing to the very enfeebled state of the patient, but for the free intravenous injection of saline solution. With these two cases he contrasted the condition of bowel seen in strangulation hernia, when the constricting medium was broad and produced no local distinctive change in the gut. In such, the condition of the strangulated loop simulated that resulting from the experimental ligature of a loop of bowel by a piece of broad tape or gauze, the bowel becoming intensely congested, thick, leathery, inelastic, and, for a longer or shorter time after the constriction had been removed, functionless. If it were subjected to the influence of the constriction for a sufficiently long time, gangrene took place at the convexity of the loop, commencing at a point most distant from the constriction. He pointed out that between these two extremes any number of intermediate conditions and combinations occurred, and he indicated their importance surgically. The freedom of the bowel from congestion in the two cases described, he explained in this manner: When the loop first be-

came strangulated, it probably soon became more or less congested, but the very sharp constricting margin produced rapid destruction of the soft mucous and muscular coats of the bowel by its pressure, and their consequent disappearance enabled the veins which were originally constricted to dilate, and to occupy the space filled originally by these bulky coats, so the back flow of blood from the bowel was carried on satisfactorily, the loop recovering its normal appearance more or less completely and rapidly.

OBSTETRICS.

ON RAPID DILATATION OF THE UTERUS FOR DIAGNOSIS AND TREATMENT IN CASES OF UTERINE HÆMORRHAGE.

Dr. Amand Ruth read a paper on this subject at a meeting of the London Medical Society based on 52 consecutive cases; 42 out of the total 52 cases (18 per cent.) were found, after dilatation, to have a removable intrauterine cause for the hæmorrhage. If in a series of cases set apart for Apostoli's treatment the uterus were first explored and then tabulated according to whether the fibroids were intramural, submucous, and polypoid, or whether a fungous endometritis were present, and the result of the treatment thus recorded, the class of cases in which Apostoli's treatment was appropriate would soon be known, and the previous dilatation would have enabled the operator to ascertain the exact spot where the current could be best applied. Long-handled metallic graduated bougies were considered the best dilators, under deep anæsthesia, with rigid antisepsis. The question of tubal dilatation complicating uterine disease was discussed with reference to rapid dilatation. The 52 cases consisted of 13 placental or membranous retentions, 5 polypi, 2 polypi and fungous endometritis, 2 fibroids without fungous endometritis, 7 fibroids with fungous endometritis, 8 fungous endometritis, 5 granular endometritis, 5 malignant disease; in 5 no intrauterine cause was found. The following conclusions were considered to be proved: 1. That where there was profuse menorrhagia, and more especially where metrorrhagia was also present without obvious cause, the cavity of the uterus should be explored. 2. That the best way to explore the uterine cavity was to rapidly dilate the cervix with graduated bougies under anæsthesia. 3. That with rigid antisepsis there was practically no risk, and very rarely any subsequest pyrexia, unless malignant disease or salpingitis was present. 4. That even when tubal disease was present or suspected, exploratory dilatation of the cervix for metrorrhagia of apparently intrauterine origin was not necessarily contraindicated, salpingitis being often secondary to and aggravated by intrauterine disease. Here, again, antisepsis was all important. 5. That where fibroids of the uterus were evidently present the immediate cause of the hæmorrhage might be a removable one, such as a co-existing polypus or a fungous endometritis, and that, therefore, the uterine cavity should be, when practicable, explored before removal of the appendages or hysterectomy was entertained. 6. That in some cases dilatation alone sufficed to greatly relieve both the hæmorrhage and pain. 7. That if an exploratory dilatation were more often adopted prior to the employment of Apostoli's treatment, it would tend to a more exact knowledge of its applicability, and put its use on a more scientific basis.

PORRO'S OPERATION: RETROPERITONEAL TREATMENT OF PEDICLE.

Hans v. Woerz (*Centralbl. f. Gynak.*, No 5, 1892) urges the advantages of sinking the pedicle after Porro's operation. Professor Chrobak operated in a case of mollities in October, 1891; the patient was aged 36, and in her sixth pregnancy; the pelvis was much contracted, the urine free from albumen. The uterus was drawn out and two large flaps of peritoneum dissected off from before and behind. As the serous membrane was thick and vascular and but loosely connected with the muscular coat of the pregnant uterus, its dissection was very easy. A vertical incision was then made in the uterus, the elastic ligature being applied, and a living full-term fœtus removed. The placenta and membranes were removed. The broad ligaments were secured after the usual manner. Then the uterus was cut away above the ligature. A large tampon of iodo-

form gause was pushed into the vagina so as to lie against the os. The raw surface of the cervix was cauterized with Paquelin's instrument and the uterine arteries secured by transfixion. The elastic ligature was removed: some vessels bled and had to be tied, but much of the tissue of the cervix had to be trimmed away and the cautery applied once more. An iodoform point was thrust into the cervical canal from the abdominal aspect. Some vessels began to bleed and were secured. The cervix and the flaps had retracted considerably by this time. The flaps were carefully sewn over the raw surface with interrupted silk ligatures. The abdominal wound was then closed. The patient recovered. Two months later the cervix felt perfectly movable, there being no inflammatory infiltration in the pelvis. The removal of the appendages had already checked the advance of the mollities: the bones no longer ached as before.—*Brit. Med. Jour.*

MULTIPLE ARTHRITIS CAUSING PREMATURE LABOR.

The clinical bearing of arthritis during pregnancy is considered by Tracon and Bué in the *Archives de Tocologie*, 1892, No. 1. They report two cases as follows: The first was a woman pregnant for the second time, who was subject to sudden cold followed by pains in the lower extremities, especially in the right knee. She entered a hospital where she was observed to have fever for several days. The pains passed through the lower extremities to the upper, the left shoulder becoming especially involved. On entering the Maternity Hospital her rheumatic affection was most prominent in the thumb of the right hand, which was immovable and very painful to the touch. The right knee was also very painful and partly ankylosed. The patient had abundant leucorrhœal discharge but otherwise revealed nothing of interest. The induction of labor was determined upon by the method of warm antiseptic douches. Soon after delivery the pains began to grow less, and finally disappeared under treatment by counter-irritation. The child suffered from pain in the left arm, which caused it to immobilize the limb.

The second case was that of a woman aged twenty-seven years. She was taken during pregnancy with inflammation of the right knee, which had been previously immobilized by a surgeon. The arthritis was considered gonorrhœal.

GYNECOLOGY.

METRORRHAGIA.

Hydrastinin hydrochlorate in doses of a third of a grain, every six or eight hours, is recommended as a useful remedy in the treatment of metrorrhagia dependent upon congestion or catarrhal inflammation of the uterus. The good results should be perceptible in the course of two or three days. —*Berlin, klin. Wochenschr.*, No. 7.

BACTERIOLOGY OF ENDOMETRITIS.

In order to investigate the bacteriology of endometritis, Dr. Brandt of St. Petersburgh recently examined twenty-five cases, including hæmorrhagic, catarrhal, gonorrhœal, and septic forms. After carefully cleansing the external genitals, the vagina, and the cervical canal with a solution of corrosive sublimate of the strength of 1 in 1000, with alcohol and with ether, preliminary bacteriological observations on scrapings from the cervical canal invariably giving negative results, the internal surface of the uterus was scraped with a curette, and dry preparations as well as cultures in agar and gelatine were made. The plate method was likewise employed, as were inoculations in animals. The portions of mucous membrane brought away were also carefully examined with the microscope. In almost all cases microbes were found, both pathogenic and non-pathogenic—the former, however, preponderating. Of these both cluster and chain cocci were met with, amongst the non-pathogenic bacteria there were occasionally bacilli, but most commonly cocci. It was remarked that cases where pyogenic microbes were found were not clinically distinguishable from others where none could be detected: these pyogenic microbes, however, when injected into animals invariably produced both local and general symptoms, such as abscesses and a rise of temperature. Sometimes but by no means always, microbes were seen in the substance of the mucous membrane.—*Lancet.*

EFFECTS OF CAUSTICS ON THE ENDOMETRIUM.

L. M. Bossi (*Nouvelles Arch. d'Obstet. et de Gyénc.*, January 25th, 1892) continues his researches, which demonstrate the very definite effects of strong caustics, such as chloride of zinc points, on the endometrium. The caustic does not simply destroy the mucous membrane forever; on the contrary, the endometrium is reproduced, but in a morbid form. The chief feature in this change is a violent inflammatory process, which causes the orifices of the uterine tubular glands to be obliterated. The glands then undergo cystic changes. Secondary atrophy of the endometrium may occur, but more frequently that membrane is reproduced with the abnormal addition of numerous cysts, which bear glandular epithelium and increase in size. The application of the curette, on the other hand, gives rise to none of these bad and permanent results. The epithelium of the endometrium is reproduced, and no obliteration of the orifices of the glands, no subsequent cystic changes occur.—*Brit. Med. Jour.*

APHTHÆ OR "THRUSH" OF THE VULVA.

P. Gilulini (*Centralbl. f. Gynäk.*, December 26th, 1891) describes a case of aphthæ, or rather an eruption identical with the parasitic stomatitis, or "thrush" of infants, which occurred in a woman, aged 24, in the second month of pregnancy. Two months previous one of her children had an attack of thrush. The patient suddenly felt very ill, and suffered from intolerable burning and itching in the vulva. The labia majora and minora were found much swollen. The labia minora were of a deep red colour, and dotted over with little white spots, which disappeared on brushing the surface gently with wool, leaving behind very superficial breaches of the epithelium. The entrance to the vagina was as yet free. A thick yellow discharge proceeded from the vagina. Although the parts were at once washed with a solution of sulphate of zinc and carbolic acid, the disease made great progress, and on the next day the entire vulva and part of the vagina appeared as though covered with a thin film-like layer of curds. The œdema of the vulva had increased, micturition caused pain and burning sensation, and the temperature was high. Diphtheria was suspected, and some of the milky film was examined, when the *oïdium* or *saccharomyces albicans* was discovered. Lead lotions were applied to the parts, and the vagina was syringed with a solution of carbolate of lime. In about five days the patient was cured. The urine was free from sugar.—*Brit. Med. Jour.*

PEDIATRICS.

PAPOID IN DIPHTHERIA.

Dr. I. N. Love finds that an application destructive to the membrane and at the same time germicidal in its effects, is a vegetable product derived from the Papaya Carica and possessed of marked digestive powers, known as papoid. It comes in the form of a powder, a small portion of which should be used at intervals of one, two or three hours as may be desired, according to the extent of the deposit which we may desire to remove. The same should be made into a paste with a small quantity of water and applied with a fine camel's hair brush. I have found this product very satisfactory as a destroyer of the membrane. An additional advantage of this application is that such parts as may be swallowed will serve to help nature to digest whatever food there may be in the alimentary canal. This is not an unimportant point, and right here, in order to emphasize the importance of nutrition, we will anticipate that which will be considered later, and suggest that in the beginning of the treatment, the alimentary canal should be promptly emptied and placed in the best possible shape for the securement of nutrition, because we have a "battle of the cells" before us, and the greatest enemy to the Klebs-Löffler bacillus, or any other, is well-nourished blood. Insist upon an abundance of nourishment from the start. Food that is in a form ready to be promptly assimilated, such as eggs, peptonized milk with beef peptonoids, bovinine and raw scraped beef, together with fresh well-ripened fruits should be given ad libitum. Another delicacy which we can give them, and one that they are fond of, is ice cream, and if we can have it made at home, it is better for then we can be sure that the best and purest cream is used. Ice cream, by the manner of prep-

aration, is rendered more digestible than cream would otherwise be without this treatment. It is grateful to the palate, cooling to the burning throat, and may be utilized as one of the rewards which we can offer to our little patient, for the taking of our medicines. We will not go far wrong if during the progress of our case we give from one to two grains of Papoid just referred to, either in the form of a powder, in a capsule, in solution or it may be mixed with a little powdered chocolate and sugar and taken as a bonbon. Given in this way it serves to help the digestive apparatus in the important work that is before it.—*Medical Mirror.*

FOR COLIC.

℞

Tinct. opii (deodorata)	5 j
Chloroform	5 j
Spts. peppermint	5 j
Tinct. podophyllin	5 j

M. Sig.—Teaspoonful in one-third of a glass of sweetened hot water; children in proportion; repeating the dose every half hour or hour until relieved, increasing the amount if necessary. As an extemporaneous prescription the above is a great favorite of mine.

The tincture of podophyllin is easily made by percolation. Place in the percolator sixteen grains of the drug, previously moistened with alcohol, then pour on a sufficient amount to make two ounces. If preferred it may be made by macerating the podophyllin in two ounces of alcohol for seven days, then filtering through paper, adding alcohol sufficient to make two ounces of the tincture.

T. G. Stephens, M. D.—*In Medical Science.*

CHRONIC PERITONITIS IN CHILDREN.

Henoch, in a paper on chronic peritonitis in children (*Deutsche med. Woch.*, January 7th, 1892) directs attention to some of the rarer forms and causes. He observes that a certain small proportion of the cases are due to trauma, and relates an instance in which enormous ascites followed without pain or tenderness on an injury to the belly; in this case there was extreme plastic peritonitis. He also relates a case in a girl aged 11, of peritonitis coming on about two months after measles; the amount of fluid which collected was very large. She had been tapped twice before coming under Henoch's care, but at the third tapping 1¼ gallon was withdrawn; the fluid again collected, but subsequently diminished spontaneously, and the child made a perfect recovery. The diagnosis of such a case is difficult, but after withdrawal of the fluid it could be ascertained that the abdominal organs presentedi no evidence of enlargement, and that in particular the liver was not altered in size. The treatment under which the girl recovered was hot air baths, and painting of the abdomen with iodoform collodion. Henoch admits that the treatment of chronic peritonitis, and especially of tuberculous peritonitis, by medical measures is very unsatisfactory; hydropathic packing of the belly, painting with iodoform and tincture of iodine, and the administration of iodide of iron are all useless, and tapping commonly affords only temporary relief. As to the alleged cures by laparotomy, he doubts their permanency, and mentions a case which illustrates the liability to mistaken diagnosis; in this case the child, a girl aged 5, presented well marked ascites, and exudation into the left pleura; the latter disappeared under treatment, but the former did not; laparotomy was performed and the peritoneum was found to be covered with small reddish-gray granulations; some of these granulations removed and carefully examined proved not to be tuberculous; the child made a rapid and complete recovery. Henoch considers that this was a case of simple peritonitis accompanied by the formation of small fibromata, as has been observed occasionally in women. He states that on two occasions he has seen a similar condition in the pleura; he compares it with the case of peritonitis following injury, in which there was a remarkable thickening of the peritoneum. In discussing Henoch's paper, Baginsky observed that simple peritonitis seemed sometimes to be secondary to intestinal catarrh, and with reference to treatment spoke very unfavorably of laparotomy. He had the operation performed in two cases, but would never again submit a young child suffering from tuberculous peritonitis to it. In older children, and in cases in which there was a large amount of fluid, it might be justifiable. Henoch considered that the operation was always justifiable in the early stage if the other organs were free from evidence of tuberculosis, and ob-

served that no other treatment had ever succeeded in giving such good results in undoubted tuberculous peritonitis, as had been reported by competent surgeons after laparotomy.—*Brit. Med. Jour.*

ANTIPYRINE IN WHOOPING-COUGH.

Dr. E. Feer (*Medical Press*, 1892, No. 2749, p. 24) believes that this remedy should have the first place in the treatment of whooping cough. Eighty cases were under observation and the dose was in proportion of that of fifteen grains for a ten-year old child, given morning and evening. When several children in the family were affected with this disease the results were not so good (mutual reinfection—Professor Hagenbach). The remedy was beneficial in four-fifths of the cases. It cannot be ascertained whether it acts as a germicide or as a sedative—very likely the latter, as Demme and Sèe have proved that it has a direct restrictive influence upon the reflexes.

GROWING FEVER.

Barbillion has written a long article on the so-called growing fever of children. His conclusions are that the fever of growth no more exists than does a fever of obesity or of senility. The symptoms which have been grouped under this head are due to a great variety of causes, such as are seen in ephemeral fever, stomach troubles, acute osteomyelitis and other pathological lesions. —*Rev. Mensuelle des Maladies de l'enfance*, January, 1892.

HYGIENE.

THE ALLEGED INCREASE OF INSANITY.

A very interesting report was presented a few days ago to the half-yearly statutory meeting of the Barony Parochial Board of Glasgow by the Acting Inspector of Poor. The board possesses a lunatic asylum at Woodilee, near Glasgow. In five years the cost of this institution has increased by £3,600, and in the same period the cost of boarding out lunatics has increased by £1,241, a total increase of £4,841. This, the inspector believes, does not indicate an actual increase of insanity but that more of the insane poor, especially old and incurable cases, are being handed over to the parochial authorities. In the half-year ending February 14th, 1892, the number of lunatics was greater by 93 than in the same period for 1886-87. A very noteworthy point was a coincident decrease in the number of paupers, to the extent of 916, implying a total saving to the rates of £3,889, equal to 1d. per £1. In six months, the worst portion of the year, the decrease in the roll of paupers was 74, attributed to increased advantage being taken of insurance and other benefit societies, to the operation of philanthropic and charitable agencies, and to a greatly improved condition of the working classes as a whole. To the discriminating action of the Relief Committee in selecting the best form of relief suitable to each applicant the result is also largely attributed. For it is noticeable that while there are 142 fewer inmates in the ordinary wards of the poor-house there are 61 more inmates of the hospital. The Inspector suggests that the development of the hospital side of the poor-house by an extension of trained sick nursing and by a more complete separation of the hospital from the poor-house will force itself upon the consideration of Poor-law authorities within the next few years.—*Brit. Med. Jour.*

VARIOLA AND VACCINE.

Dr. Chauveau, Professor in the Museum of Natural History of Paris, communicated to the public a *rèsumè* of his researches on the subject of the transformation of the virus of small pox into vaccinia, or vaccine:—

It is well known that a number of physicians and most of the people believe that vaccine, or vaccinia, produced from the bovine species for the purpose of vaccination against smallpox, is nothing else than smallpox virus itself, modified by successive passages through the animal organism. The Commission of Lyons, France, under the direction of Dr. Chauveau, has established, it seems very positively, that (as has long been believed by most thinking scientists) this is not the case. The virus used for vaccination (cow-pox or horse-pox) is certainly a close relative of the virus of smallpox, and it is perhaps legitimate to admit that they were derived from a common source or from one another, in centuries past. But at this time they are a

distinct species, and it seems impossible to reduce them to a single species by the known methods and artifices of experimentation. Inoculations of smallpox in the horse and in cattle produce variola in them, and the introduction of the virus thus produced in these animals, gives to a man variola itself. It was found that the animals inoculated with smallpox became immune against vaccinia, just the same as man inoculated with vaccinia becomes immune against variola.

The symptoms of these different viruses in animals vary considerably, and there can be no mistake made in the diagnosis.

Messrs. Haccius and Eternod of the Vaccinal Institute of Lancy, Geneva, produce a vaccinal lymph cultivated on calf, which is said to be transformed from variola, and not very long ago published their conclusion that variola and vaccinia are probably identical. M. Chauveau, in experimenting with this lymph, found that it contained, in reality, the true virus of smallpox, and therefore it is a dangerous article to use for vaccination. Vaccine, then, should not for practical purposes be considered as an attenuated variola virus, for the two are now distinct, and both are strong viruses of their respective species, whatever their origin may have been.

ARSENIC IN COMMON LIFE.

This was the subject of a recent address by Prof. C. F. Chandler before the Academy of Medicine, and abstracted in the *Medical Record*, Nov. 28, 1891. He took the ground that there is no danger to be feared from arsenical poisioning from living in rooms papered with arsenical wall-papers, that the quantity of arsenic that could be given off by such a wall-paper could not possibly do any harm. He gave a critical review of the various eases that have been collected by the Board of Health of Massachusetts, in which he finds no proof of arsenical poisoning.

He could find no record of a case of arsenical poisoning in any of the factories where arsenical wall-papers are made. He said that the symptoms of arsenical poisoning are not so specific that physicians could usually make a positive diagnosis of arsenical poisoning.

Incidentally he remarked that there should be a law prohibiting undertakers from using arsenic in the embalming process.

THE DEADLY COLD BED.

If trustworthy statistics could be had of the number of persons who die every year or become permanently diseased from sleeping in damp or colds beds, they would probably be astonishing and appalling. It is a peril that constantly besets traveling men, and if they are wise they will invariably insist on having their beds aired and dried, even at the risk of causing much trouble to their landlord. But, according to *Good Housekeeping*, it is a peril that resides also in the home, and the cold "spare room" has slain its thousands of hapless guests, and will go on with its slaughter till people learn wisdom. Not only the guests, but the family, often suffer the penalty of sleeping in cold rooms and chilling their bodies, at a time when they need all their bodily heat, by getting between cold sheets. Even in warm summer weather a cold, damp bed will get in its deadly work. It is a needless peril, and the neglect to provide dry rooms and beds has in it the elements of murder and suicide.

MEDICAL CHEMISTRY.

THE PHENOMENA OF RANCIDIFICATION.

M. Ritsert has published in the *Revue Scientifique* a very interesting paper describing the experiments made by him to solve the question of the cause of the rancidification of fats. He first directed his attention to the micro-organisms always present in fats. Isolating these and sowing them upon sterilized fats, he found that no acids were produced, and further, that subsequent enumeration of micro-organisms demonstrated that these not only did not grow and increase in numbers, but that most of them actually perish when placed in contact with sterilized fats. The inoculation of sterilized fat with rancid fat produced the same negative results. These experiments eliminated the microbian theory of the origin of rancidity. On exposing the inoculated fats to the direct sunlight M Risert noticed that the bacteria, etc., died more rapidly than when the direct light was excluded, but at the same time the fat became rapidly rancid. Light, therefore, seemed to be a direct agent in rancidification. This point fixed, the experimenter next turned his attention to the atmos-

phere, or the gases which constitute it, and investigated whether it or they played any role in the phenomenon. Nitrogen and oxygen alone, either or both of them, have no effect *in the dark* upon fats, and nitrogen alone none in the light, but oxygen and light effect rancidification rapidly. Rancidity, then, is an oxidation, but one that is never produced in the absence of light. Hence, fats kept in absolute darkness will not become rancid.

ACTION OF BORAX ON CHLORAL.

Mr. Dujardin (*Bullet. Commerc.*, April, 1891), found that in preparing solutions containing borax and chloral, considerable depends on the temperature at which the compounds are brought together. At ordinary temperatures no change is observed; on warming, however, decomposition of the chloral takes place, a long-continued, slightly elevated temperature decomposing the chloral as effectually as a few minutes boiling. The decomposition in this case seems to be similar to that which takes place when an alkaline hydrate is used; at least chloroform is one of the decomposition products. In dispensing the two substances it is recommended to dissolve the borax, if necessary, by heat, and allow the solution to cool before adding the chloral.

BISMUTH SALICYLATE.

Duyk (*Bull. Soc. Pharm. Bruxelles*, Oct., 1891), proposes the following method for the preparation of bismuth salicylate: 100 gm. subnitrate of bismuth are treated for one or two days with one litre of water, to which 50 gms. water of ammonia had been added. After shaking sufficiently the subnitrate is completely changed into an oxide, which is collected and carefully washed with water. This oxide, after expression, is heated, under constant stirring, with 25 gms. powdered salicylic acid on a water-bath. When union has been effected, which is found by using litmus paper, the salicylate of bismuth is washed and then dried at a slightly elevated temperature.

REACTION OF SALICYLIC ACID.

In the *Pharmaceutische Post*, G. Kottmeyer asserts that the statement of Vortmann that the neutral salicylates give no precipitate with barium or calcium chloride, even on heating, or when ammonia or alcohol is added, is not true. Kottmeyer finds, on the contrary, that a 20 per cent. solution of sodium salicylate gives an immediate precipitate on shaking with a strong solution of calcium chloride; a 10 per cent. solution also gives a precipitate when ammonia is added; even a 1 per cent. solution, mixed with a few drops of strong calcium chloride solution, gives a precipitate on adding a little ammonia and shaking or warming. A slight precipitate is produced when barium chloride is added to a 20 per cent. solution of sodium salicylate, and a turbidity when a 10 per cent. solution is used.—*Ex.*

NEWS AND MISCELLANY.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The second annual meeting of the American Electro-Therapeutic Association will be held in New York, October 4th, 5th, and 6th, 1892, at the N. Y. Academy of Medicine, 17 West 43rd St.

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THE
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CLINICAL LECTURES.

THE EXAMINATION OF YOUNG GIRLS.

By HENRY C. COE, M. D.,
PROFESSOR OF GYNÆCOLOGY, N. Y. POLYCLINIC.

Gentlemen:—This is a subject of considerable practical importance, on which I hold decided views which may seem at variance with some which you have heard expressed. I believe that a young unmarried woman ought not to have a pelvic examination and treatment unless in the judgment of the physician it becomes absolutely necessary; this should be the last step in the conduct of the case, not the first.

To illustrate my meaning, allow me to refer briefly to a typical case occuring in my own practice. A young lady of more than ordinary intelligence, but of nervous temperment, was sent to me recently by her physician, who inferred from her symptoms that she had some local trouble and desired me to make an examination, to which the patient was prepared to submit if necessary. She complained of backache, leucorrhœa and frequent and painful micturition, but had no severe localized pain, her menstruation was regular and painless and she presented anything but the appearance of an invalid. Reviewing her former history, I learned that last summer she had spent much of her time in the saddle on a Western ranch, sometimes riding forty miles a day without the slightest discomfort—a sufficient indication that she had no chronic uterine trouble. During the winter her habits had been sedentary, she had had obstinate constipation in consequence and defecation was followed by a throbbing pain in the rectum which suggested the possible presence of either a fissure or hæmorrhoids, which alone might account for all her pelvic symptoms. To her great relief, I told her that I preferred to try the effect of general treatment before making an examination. She had been using vaginal douches under the direction of her physician, but on inquiry, it was easy to understand why they had done no good, as she had used a small quantity of warm water while in a stooping posture. I directed her how to take copious injections of *hot* water, while only in the recumbent posture, with the hips elevated. She was to recline for an hour afterward. A laxative was prescribed with the advice that her bowels should be kept quite loose. After defecation hot applications were to be used, with a rectal suppository containing cocaine and a mild astringent.

The vesical symptoms were clearly of reflex origin, as the patient stated that they were always worse when her bowels were most constipated. There were no evidences of cystitis (the urine was examined and found to be normal), yet I have found that in these cases there is usually slight inflammation at the neck of the bladder, which is relieved by rendering the urine as bland and unirritating as possible. The simple remedy which I suggested was flax seed tea, containing a little cream of tartar, of which she was to drink three or four tumblerfuls daily. Having given careful directions with regard to diet, exercise, etc., I told the young lady to report in a week, when she was entirely relieved of the backache, leucorrhœa and vesical trouble, though the rectal symptoms still persisted and will probably require for their cure forcible dilatation of the sphincter ani under

anæsthesia, at the same time I shall be able to make a thorough vaginal examination.

My reference to anæsthesia has led me to the point which I wish to make and it is this: When you have a young girl with well-marked pelvic symptoms of long standing insist upon an examination under ether. Aside from the fact that you are able in this way alone to make an exact diagnosis, you may under some circumstances complete the treatment at the same time and thus save both the patient and yourselves further trouble. A contracted os may be dilated, an anteflexed uterus straightened, or a displacement corrected and a pessary inserted, while the presence of a diseased ovary or tube, or of a small intra-pelvic neoplasm, can be clearly determined and a decision reached regarding the necessity for a radical operation. Now there is a more important advantage still in such an examination—the elimination of nervous shock to the patient. It is inexplicable to me, the indifference which some men display in wounding the sensibilities of pure young maidens. How little do we realize what a vaginal examination means to them! It seems a trivial matter to us, but it is a dreadful experience for the patient. I am now attending a young woman who received such a nervous shock from such an examination that she has never recovered from it.

A case which made a strong impression on me in my student days and possibly led me to adopt such strong views on this subject was that of a highly educated governess, whose reduced circumstances compelled her to enter a hospital in which I was an interne. She was examined under ether and was found to have anteflexion with prolapsed ovaries. It was necessary to excise her unusually thick, rigid hymen preparatory to local treatment, which was conducted regularly two or three times a week for a couple of months. Each time that she was treated she returned to her room in such a nervous condition that she hardly recovered before she was obliged to go through the same experience again. It is needless to say that, so far from receiving any benefit from the local treatment, she left the hospital in a far worse general condition than before. The poor girl assured me that her experience seemed like a hideous nightmare. It seemed to her sensitive mind that she had suffered a shock to her moral, as well as to her physical being from which she could never recover. Death, she said, would have been preferable to the constant wounding of her delicacy.

Now, leaving what you may regard as the purely sentimental side of the question, let us look at it from a practical standpoint. Let us consider for a moment how much information can be obtained by examining a young girl at one's office. We assume that she has the familiar symptoms backache, leucorrhœa and so-called obstructive dysmenorrhœa, *i. e.*, colicky pains in the uterus immediately preceding the menstrual flow and relieved by the passage of clots. The natural inference is that she has anteflexion. We place her on her back on the table and proceed with the ordinary routine. The patient contracts her muscles rigidly and the finger is introduced only with the greatest difficulty and pain to the patient. The cervix is finally reached and the examiner, if experienced, recognizes the presence of the flexion the presence of which he had already suspected. He essays to practice the bimanual and at once finds how different the conditions are from those described in the books. The abdomen is like a board and every attempt at making deep pressure with the external hand is met by a spasmodical contraction of the recti, which baffles him. I am not describing an exceptional case, but such a one as we ordinarily encounter. Turning the patient on the side, it is now possible to insert the finger farther and thus to make out the position and probable size of the uterus, and under favorable circumstances, a prolapsed ovary. But the sensitiveness is so general and the patient is so distressed by pressure on the hymen, that it is impossible to locate exactly the seat of greatest pain. The smallest sized Simm's speculum is now introduced, not without great pain and resistance, and we catch a passing glimpse of the cervix. An attempt to pass a sound develops such a spasmodic contraction at the os internum that we are very apt to make an erroneous diagnosis of stenosis when no true stenosis exists. Now, is this a satisfactory examination, on the strength of which you would be willing to make a private diagnosis and perhaps recommend the performance of a serious operation?

When it comes to the question of regular treatment under these condi-

tions, I have never thought that I accomplished much. The possible effect of an occasional application of iodine and the introduction of one or two glycerin tampons being offset by the general disturbance of the nervous system incident to the manipulations.

To-morrow I expect to examine under ether with a colleague, a young lady whose symptoms clearly indicate local trouble, although the doctor has wisely tried general treatment, galvanism, etc., for several months with benefit before resorting to an examination. Since the symptoms are typical of the class in which some local trouble may be inferred, I mention them briefly: Constant backache, preventing much walking, profuse leucorrhœa, pain in the left ovarian region radiating down the thigh, dysmenorrhœa sufficient to keep the patient in bed for a day or two every month, with a flow too profuse for a young girl; added to these are well-marked reflex neuroses, strongly suggestive of ovarian disease. We expect to find an anteflexed uterus, possibly a prolapsed ovary, and shall be prepared to divulse and curette while the patient is under chloroform. Of the lesser degrees of pelvic trouble I have already spoken and you will pardon me for again insisting on the importance of recognizing the difference between the two.

These cases are very common in New York, occurring often among girls of sixteen to eighteen, attending the higher schools and colleges, anxious to keep up with their classes and to finish the course, straining every nerve in school and out, studying from an early morning hour until ten o'clock or later at night; continuing this every day, without rest even during the menstrual period. The bowels are always loaded with hard fæces, the girl has headache; when she feels badly she must still continue her tasks, she has no time for rest. To treat such a patient once or twice a week for backache, leucorrhœa, and dysmenorrhœa by applications to the cervix and tampons, would be as sensible as to treat her for heart or lung trouble, of the existence of which we only suspected. You would accomplish nothing. Her faulty habits of life, her neglect of the rules of hygiene entirely offset anything in the way of local treatment. I had such a patient from an intelligent family; her parents wished me to examine her, but I declined and lost the case. I told her parents that I thought the trouble was due to hard work at school, faulty habits, bad diet and dressing and to constipation; that I did not think the slight dysmenorrhœa, leucorrhœa, and backache of which she complained would be benefitted by local treatment. I wanted them to take her out of school entirely, and to put her on selected diet, tonics, and electricity. She was quite anæmic. They were not satisfied to give this a fair trial and I next heard of her going to a lady physician, who had been treating her three times a week for three months for anteflexion. Now, I do not believe that the girl had pathological anteflexion at all. The best proof of it was that she was cured without operation and became pregnant within a month after she was married, and that the marriage occurred shortly after she suspended treatment. Now, these are just the cases which an unscrupulous man may make a good deal of money out of; but, happily, to make money is not the only object of the practice of medicine. The first object is to try to benefit the patient, and you certainly will not do that, but may do a great deal of harm, by immediately starting upon a course of local treatment in young unmarried women.

What will take the place of local treatment? You always have electricity to fall back on. It need not be employed within the vagina nor is it necessary to have all the expensive apparatus described in the books. A milliampére-meter, for instance, can be dispensed with. When observing Apostoli at work I noticed that he paid quite as much attention to the sensations of the patient as to his milliampére meter. In applying the galvanic current, then, you will practically come to give more heed to the sensations of the patient and the after effects of the application than to the exact dosage. The class of cases under consideration are much relieved by placing one electrode over the sacrum and the other over the ovarian region, passing a current of moderate intensity, just sufficiently strong to cause a warm, burning sensation. This simple treatment repeated twice or three times a week often produces a remarkably beneficial effect. I am unable to say just how the effect is brought about. There have been a good many learned explanations of

the action of electricity on the pelvic organs, but they are like many other theories in medicine, they seem to be only as a matter of fact electricity does remove pain in those cases in which there is no serious organic change. Dysmenorrhœa is often entirely relieved. But you must tell the patient in advance that it will be necessary to give it a fair trial, and not to expect marvelous results from one or two applications.

I find that general practitioners often fail to recognize clearly the indications for the use of the different currents, made clear to your mind if you remember that the galvanic current is in general sedative, the faradic stimulating. If you want sedation (as in ovarian pain), apply the galvanic current. If there is non-development, amenorrhœa, a small infantile uterus or subinvolution you want stimulation, which is obtained by the frequently repeated shocks of the faradic current: In such a case put one pole over the sacrum and the other on the abdomen over the fundus uteri. If you make intra-vaginal application place one electrode against (or within) the cervix, the other on the abdomen over the fundus.

Regarding general treatment, iron is usually indicated, and I often use manganese. There is a preparation called the pepto-manganate of iron which acts well. I regulate the bowels with a mild laxative, usually cascara. The patients should bathe regularly. They may take a cold sprinkle, followed by a good rubbing. Regarding vaginal douches, I would refrain from using them as long as possible in the case of young girls. It is unfortunate to have them begin to tinker with themselves, unless it be necessary for a profuse leucorrhœa, which will not stop after general measures have been tried. When indicated, the mother can instruct the patient how to use the douche.

The proper regulation of the bowels is important. It is not sufficient to simply prescribe a laxative. The large intestine should be thoroughly cleaned out. It is common for women to come to the clinic and say that their bowels move regularly and yet on investigation to find large fæcal masses in the rectum. These masses may press the cervix forward, and a prolapsed ovary may be constantly compressed by the distended rectum, causing much pain and aggravation of the trouble. The rectum should, then, be emptied every day, not alone to obviate mechanical pressure, but also pelvic congestion.

It is important to have the patient rest during the menstrual period. Mothers generally seem to be strangely indifferent to the sexual hygiene of their daughters. Some mothers will come to the physician and complain that their daughters will not remain quiet during the periods ; that they go to parties, to dances, skating, coasting, and one young woman told me that she went bathing during a menstrual period. It shows either gross carelessness or dense ignorance on the part of mothers to allow their daughters to so flagrantly violate health laws. I do not think that a woamn is fit to bring up a girl if she is not sufficiently well informed to instruct her about the ordinary principles of physiology. Many of the things which girls do during the menstrual period invite attacks of peritonitis. Every woman should keep quiet the first day of the period, and lie on the sofa or bed.

These simple rules fragmentary as they are, I think, will in the majority of cases do away with the necessity for an examination of young girls. I feel very strongly upon the subject, for I think it is a very important one. In the routine of a clinic, physicians are apt to have girls who may come for the first time, put on the table, and submitted to an examination without stopping to think of the consequences. There is something more to take into consideration than the mere question of a diagnosis. In the late Professor Flint's classical work it is stated in an introductory chapter that the first thing which the doctor should look to is that his medicine shall do his patients no harm ; next, that it does them some good. That applies to all therapeutics local and general. Stop and consider whether what you are about to do will in any wise injure the patient mentally or physically, and then whether it will do her any good. With that idea in mind, I advise you to put off an examination in girls as long as you can consistent with the symptoms. If the symptoms are such that you feel it is not doing her justice, that it is not scientific to longer defer it then make the examination under an anæsthetic. The patient will rarely object it, and the parents will not if the situation is properly explained.

COMMUNICATIONS.

PNEUMONIA AND ITS TREATMENT.*

By HIRAM CORSON, M. D.
PLYMOUTH MEETING, PA.

What is pneumonia? That question correctly answered, we will be prepared to treat it. Professor George B. Wood, of the University of Pennsylvania, one of the most accurate describers of disease and a practitioner of great eminence, to whose graphic descriptions of disease many of you have listened, says in his *Practice of Medicine*, that, "pneumonia has three stages, and is universally applied to inflammation of the lungs. In the first stage the lungs are merely engorged with blood, and the air-cells filled with a sero-mucous, somewhat bloody effusion. In the second stage a plastic extravasation has taken place, and the cells are filled with more or less concrete and bloody lymph. In the third stage the place of the plastic secretion has been supplied by a purulent fluid." Dr. Wood was a truthful man, had great opportunities in the Philadelphia Hospital to see the condition of the lungs in the different stages described by him, for they may all be present in a lung at the same time, when the disease continues to embrace fresh portions of it. In that I doubt not he is correct. But as the subject which now engages our attention is one of great importance, I beg you to bear with me while I quote from another author. Dr. G. R. Martine, of Glens Falls, N. Y., in a paper read before the American Medical Association in June, 1889, published in its journal September, 1889—a paper remarkable for its accurate description of the disease as it exists in cases involving much of the lung, and for erroneous deductions in relation to treatment—thus speaks:

"The first abnormal symptoms, after the premonitory chill, are the quickening of the pulse and the subsequent increased flow of arterial blood. Now, if we could take a microscopic view of the minute arterial ramifications in the lung structure, we would discern a distention in the caliber of the air-vessels in order to accommodate the augmented flow of blood; and if we would glance at the veins we would observe the plasma layer rapidly filling with white corpuscles, and the walls of the veins, irritated by the friction of increased circulation, would exhibit, here and there, white corpuscles adhering to their tenacious sides and finally penetrating their walls. A glance at the capillaries would show not only the white, but also the red corpuscles forcing their way through the overstrained capillary walls until the surroundings become engorged by their extravasation, and hepatization has commenced." Now, if we bear in mind the condition of the lungs as described by the writers, we must believe that pneumonia is first a congestion, then an inflammation, and if that be not arrested suppuration takes place. Dr. Wood says: "It has been doubted whether a cure is ever effected in this last stage."

We are now brought face to face with the disease. Is there anything we can do to remove the congestion? The patient has been sick less than twenty-four hours, he is not yet expectorating bloody sputa, and many of the opponents to blood-letting say this disease cannot be aborted; that, like measles, it has a course to run, despite all interferences; that it is a constitutional disease, and that if we can prevent the congestion from being too suffocative, the inflammation from involving too much of the lung, we may let it run its course. The members of our profession are divided into two classes: those who believe that the disease may be aborted, *i. e.*, arrested in the congestive stage if early called, and in the stage of inflammation before suppuration has taken place; and the much more numerous class, who believe that it cannot be aborted; that a case, even if it be in its incipiency, must go on—should be watched by the physician, and shorn of its power to take life, but be allowed to go on until a crisis is reached after a positively fixed number of days. Physicians of the first class aim to relieve the overloaded and suffering lung by the abstraction of blood, by means of the lancet, from the veins of the arm; and those of the second class, who boast that they "never bleed" in any disease, depend on giving relief by reducing the increased action of the heart with medicines which have that effect. But the members of this latter class are greatly divided in opinion as to

*Read before the Philadelphia County Medical Society, April 13, 1892.

the proper medicine to be used to hold the heart in check; what one regards as being very useful and safe, another considers dangerous—more dangerous than the disease, and withal inefficient—yet all speak from experience, each one with his remedy. Experience is a harmful thing, as a reason for continuing to practice a certain course, unless it has been successful experience. It reminds me of a case: I had attended a woman in her confinement, and, as she expected to have the child raised by hand, as the phrase goes, and had read my paper on "Food for Infants," so, when she appeared, I said: "Nurse, do you know how to feed a child so as to rear it without the mother's milk?" Oh, yes! I have had experience in doing that; my sister had three that I had to raise that way." "Well, how did they come on?" "Oh, very well; one of them lived until it was six months old." Who among us but can look back on measures which we practised, and which we believed indispensable because we had proved them, as we thought, by a long experience, but which we now see were not only useless but injurious. This, then, successful experience in the treatment of pneumonia is what we should follow. The absence of success, the fearful mortality attending the arterial sedative practice of the "no blood to spare" party; the immediate relief, the successful arrest of pneumonia by blood-letting, during a whole century, should cause the opponents to venesection to cease their abuse of those whose successful experience in the use of it has been testified to by some of the most eminent men of this city and this country. A few weeks ago I was told by a gentleman holding a high State office, that a physican of whom he inquired concerning the recent death of a prominent man, replied: "Oh! he was murdered by blood-letting." Does this man, who speaks so boldly about a measure of relief of which he knows nothing from actual experience, who never used the lancet in his lifetime, denounce Prof. George B. Wood, Physic, Parrish and the elder Hartshorne, Chapman, Samuel George Morton, Ezra Michener, Prof. Henry H. Smith, the Atlees—John and Washington—Traill Green, Henry Hartshorne, Jackson of Northumberland, N. S. Davis, Prof. S. D. Gross, and hundreds of others who could be named, as conscientious as himself and far more truthful? We have borne this stereotyped abuse long enough. Look at the terror spread over the country now, when these numerous deaths of the best of our people are every day announced, though all were in the hands of practitioners skilled in arterial sedation. Let us now see what the opponents of blood-letting resort to, to save the sufferers from death in this disease. From what I have learned of the present teachings in our colleges, and by conversations with practitioners, the main object is "to keep down the pulse"—that is the phrase. To do this, the most approved medicine is the fluid extract of veratrum viride.

"The object aimed at," says Dr. Martine, "is to hold the pulse below eighty;" and adds, "*that* is not only what should be done, but what *must* be done to save life." I know full well *that* is not necessary. Scores of times, after I have bled freely, with great relief to the patient and arrest of the disease, the heart, though tamed by the bleeding, continued its pulsations at from 80 to 100 per minute, or sometimes even more for two or three days, and yet the convalescence went on. Again, he says: "With what remedies do I hold the pulse at this point (below eighty)? and adds,, "veratrum viride seems to have served one best." To this, Dr. H. A. Hare, who was present at the reading, replied: "A great mistake is made in saying use cardiac sedatives in pneumonia, without recognizing the fact that they are to be used only in the first stage, before congestion has gone on to consolidation; the man who gives such drugs at the middle or end of an attack of pneumonia, might as well stab his patient. Digitalis is to be used at such times." It therefore appears that it is only in the congestive stage that veratrum is to be used. If this be true—and doubtless it is based on experience—how many patients have been sent to their graves by this much-used medicine! for well do we all know that it is the most used of all the arterial sedatives to keep down the pulse. And even Dr. Martine has peremptorily declared that it must be kept down, and that veratrum viride seems to have served him best. But it is not only Dr. Martine who disregards the stage of the disease, and uses it in all stages if the pulse is above eighty. I have long believed that nearly all the cases of pneumo-

nia which terminated in death within four days, and I know several such were hurried there by this patent and dangerous drug. Dr. I. E. Atkinson, of Baltimore, followed Dr. Hare, and said that "the use of veratria in the treatment was new; it had been several years under trial, and had not received general acceptance." If Dr. Hare's utterance be true, then veratrum viride can scarcely be used at all without killing the patient, for a physician is seldom called until the congestion has passed into the second stage, when, according to Dr. Hare you might as well stab the patient as to give it. How unerring must be the diagnosis, in order that this medicine may be given without risking the life of the patient. I have inquired of many of the "no blood to spare" class and have rarely found two that have the same treatment. Those who use aconite are afraid to use veratria, while the latter regard aconite as being more dangerous and less efficient Those, too, who use digitalis are afraid of the two drugs just named, and those who give two drops every two hours denounce others who give large doses of it (10 to 20 drops, frequently repeated) as pursuing a most dangerous practice. Judging from the accusations made by themselves against each other, what safety is there to the patient? The answer comes in saddest tones from homes made desolate by dangerous arterial depressants. To the two classes of opponents to blood-letting spoken of, there are others which should have a passing notice: first, those who rely on the use of sulphate of quinine to keep down the pulse and to diminish the heat of the body. While quinine is, in malarial diseases, an unrivaled medicine and has done valuable service, it is useless, if not really most injurious, in the treatment of pneumonia and other inflammatory diseases. We should feel greatly indebted to Dr. Horatio C. Wood for the experiments which proved to him that even very large doses of that medicine cannot hold the temperature of the body at a low figure. There was so much stress laid on the importance of preventing heart failure, by keeping down the temperature by means of quinine above all other medicines, because of its tonic powers, that Dr. Ripley, the two Drs. Jacobi and three other physycians of New York City made careful and repeated experiments to determine the value of the drug in that respect, and demonstrated beyond cavil that it is never useful, and often greatly objectionable—really injurious—in the treatment of pneumonia. I have often felt exceedingly thankful to Dr. Wood and the New York doctors for their careful and effective labors in that direction, and greatly amazed that, in the face of the assertions that quinine is useless in pneumonia to effect the purpose for which it is used, some persons still persist in its use. Many lives have thus been lost. The second class of those who fraternize with the arterial sedative practitioners is composed of the whiskey or stimulant practitioners—the physicians who see typhoid and blood-poison symptoms in all diseases. I will spend but little time with them. They are belated people clothed in, and proud of, the cast-off garments of progressive physicians. Let us look calmly at this subject. Are there physicians here who can say that there are medicinal properties in whiskey or in brandy which, in either large or small doses, warrant us in trusting the life of a patient to their action? It is a serious thing to experiment with human life. No means but those which have proved successful in numerous cases should be used when our patients are struggling for breath, and death hovering over them. There is nothing more saddening to me in the sick-chamber than to see a physician forcing alcoholic drinks on the dying patients, and yet it has been done countless thousands of times, and now oftimes they are used in the very earliest stages of pneumonia. Dr. N. S. Davis does not believe them essential in any disease. If, then, arterial sedatives, quinine, and alcohol are not adapted to relieve the congestion and inflammation of the lung, which constitute pneumonia, is there any remedy for that now fatal disease? We know that there is, but not from an experience like that of the nurse already named, nor of another one, greatly experienced, of whom allow me to speak. I was called to a child, lying on the lap of a friend, "because she had had experience with such cases." I said, "The child seems very sick." "Yes," she replied, "it has summer complaint, and it will die." "How do you know it will die?" "Oh! I have had experience, I had ten of them with it." "All your own children? did they all die?" "Yes." "Did you have the same

doctor for them all?" "Yes." "Well, your experience is worth nothing." I treated the child, and, to her disgust, it was soon well. Her experience is a fair type of the experience of those physicians who go on with the same fatal treatment, lose one patient after another, and speak of "experience" in treating the disease.

But now a word about those who "murder" their patients by bleeding them. What are the objections urged against blood-letting? and by whom? The first objection is, "No one has any blood to spare." If this be true, then it embraces all other objections, and none need be named. This certainly means that in health as well as in disease, the loss of even a small quantity of blood would be injurious to the loser of it. It means more than that—means, as is boldly asserted, that it is a permanent injury to the body, the bad effect of which is seen in the permanently weakened system of the person. Thousands of facts disproving this, and which are daily before our eyes, count for nothing. One would suppose that if half a dozen, or even one, of the respectable, truthful men here should declare that he had often bled persons in various diseases with the greatest of benefit to them, nothing more would be needed to prove the falsity of the declaration, "No blood to spare"—a cry so senseless, so false, that no decent man should utter it.

The very first act of these objectors after the birth of a child, in cases attended by them, is deliberately to cut the cord and waste two ounces of blood that ought to have passed into the body of the child.* But there is another objection urged, viz., that even in the earliest stage of the disease under consideration, though some relief may be obtained, no blood should be taken, lest it should leave the patient too weak to resist the exhaustion of a later stage—leave him in a condition in which even whiskey and rich food would, though *pushed*, not be able to save him from death.

Is it, then, injurious to take blood from a pneumonic patient?

This is the cry and the charge of those who have never seen a patient bled, and yet who have known its safety and value to be testified to by some of the most eminent physicians who have ever lived in this century or preceding ones. In my last four papers, published in the *Medical and Surgical Reporter*, I have given a few cases reported by the Conshohocken doctors, which were bled freely, and were so successful that opposition to venesection should be silenced in those who read them. I will now speak of some seen by myself, and in doing so will present some views which I have long held:

On February 16, 1887, I was called to see a physician two days after an acute, serious attack of pneumonia. I found he was under treatment by one "who never bleeds in any disease." He was expectorating the bloody, "rust-colored, prune-juice" sputa, a quantity of it being in the basin; had great oppression and that peculiar sense of great weakness so constant an attendant in pneumonia when the obstruction to free breathing exists. I had to wait nearly three hours for the return of the physician, and when he did come he was opposed to bleeding, and refused to accede to it, but proposed that the patient choose whether or not he would be bled. The patient knew well our different modes of treatment, and promptly said, "I will be bled." I asked the doctor to remain, and, slipping another pillow under the sick man's head, I drew blood until I found the pulse yielding in *force* and knew that faintness was approaching. Withdrawing the pillow to lower the head, I closed the vein and took a seat. In about ten minutes I inquired, "How do you feel?" "I am much relieved; I think it will do me great good. This was at noon. Went again in the evening; he was pretty comfortable, breathed much more easily, and had not coughed up the least particle of blood or rusty sputum since the bleeding. The distended blood-vessels were relieved of their fulness, and "the slow exudation from the inflamed vessels" spoken of by Dr. Wood was no longer forced through their coats. Would one or twenty doses of arterial sedatives have produced that effect? Having bled my patient what next did I do? Nothing, but told him that I would see him in a few hours.

And here let me say that, in the case already alluded to, when I saw by the papers that he had been bled, I said, "In all human probability he will die! "Why?" was asked. "Because he was

* See Transactions of the Penna. State Med. Soc. for 1872, p. 154.

Timidly bled by one unused to venesection and fearful of it, and because the other depressing, arterial sedative treatment will follow it, and the patient will suffer from their poisonous, depressing effects.

To return to my case : When I saw the patient a few hours afterward I found him pretty comfortable. I directed one Dover's powder, to be repeated in the night, if need be, because of pain. Next day a mild diaphoretic was administered.

Two days after this a physician who, as a neighbor, had given much attention to his sick friend, asked me : How do you find your patient?" I said : "He is well ; he needs only a few days in bed to regain his strength." I left for home, and he went to the patient and said to him : "The Doctor told me just now that you are well. What was it that cured you? was it that blood that came from your arm?" He replied : "The blood did not come from my arm ; it came from here," laying his hand on the affected side. "I felt it going from here as it went into the basin." How strong this testimony, given by a physician who felt in his own person the relief obtained by venesection! How confirmatory, too, is this of the testimony of Dr. Gross, the elder, who, in a discussion, had in the State Medical Society illustrated the effect of venesection in this way : "Should a man have an inflammation of the conjunctiva, and capillary vessels be so injected that the blood was of a deep redness ; and then he, being in a sitting posture, should be bled largely, the blood would be drawn from the capillaries, and the redness disappear. Just so does it draw the blood away from the capillaries,, of the congested and inflamed lung." Veratum viride in doses large enough to keep the pulse below 80, would not produce the least relief to the distended capillaries.. Having bled the patient, if in a few hours there is not much relief, he may be bled again, if needful, and even more than once. But what of local measures? Do I approve of the poultice or the pads of cotton to envelop the chest? No. Two years ago, after my criticism of Dr. Wells's paper was published, an aged physician regretted that I had not spoken of the value of "the blister" over the affected part. The subject before me was only that of "Blood-letting : Its Value or Danger." It is the same now, but I may add here that the application of cloths dipped in ice-water is to the patient the most agreeable application that I have ever used.

Despite the great length of this paper, I beg of you to hear the utterances of one of our most eminent men to his students at his clinic in the University Hospital, and published in the February number of the *International Medical Magazine*, pp. 43-45. Dr. William Pepper stated to his pupils at the clinic, that "the man of twenty-eight years had been well until ten weeks before his admission to the ward, and had during that time been treated by several physicians. On admission, November 5th, his distress was extreme; he was unable to lie down or recline, and was obliged to remain constantly in a sitting position, but did not get relief from leaning forward." Then follows a long and interesting account of the illness and treatment; after which follows: "On November 7th, the third day of his stay in the hospital, the symptoms were alarming, with deep cyanosis, labored action of the heart, orthopnœa, and high fever, that I had him bled from the arm to the extent of twenty ounces. The good effect of this was immediate, and although cyanotic symptoms returned to some extent on the following day; a material improvement dated from the time of the venesection." Again the learned professor at great length gives his views of the case, and before closing his paper remarks, January 5th: "He has continued to do well. and is now thoroughly convalescent. Before closing, I would call your attention to the extraordinary effect which followed the abstraction of blood. All of us who saw his condition before the bleeding, and watched the immediate effect of this, were satisfied that his life was saved thereby. I doubt if any other remedy could have acted so promptly and efficiently. It was the observation of such striking results, when bleeding was used in suitable cases, that gradually led our medical forefathers to rely upon it more and more in grave crisis, until its occasional and legitimate use degenerated into almost promiscuous abuse. It is one of the tasks set before clinical medicine to-day to indicate with the greater precision, rendered possible by our improved methods of investigation and more full knowledge of natural history of disease, the exact conditions un-

der which this most powerful remedial measure is to be adopted."

Such are the recent utterances of the able editor of *A System of Medicine by American Authors*, in which is a paper by Alfred Loomis, M. D., Professor of Practice in the University of New York, who believes "pneumonia a constitutional disease, with a local manifestation," and regards blood-letting as a dangerous plan of treatment. Such, too, has been the views taught to large classes of students by Prof. Pepper until he made trial of the remedy. I sincerely hope that Prof. Loomis, too, will make a trial of it hereafter, and be induced, like Dr. Pepper, "to doubt that any other remedy could have acted so promptly and efficiently."

I cannot be too grateful to Prof. Pepper for his valuable testimony in relation to venesection, and for the hope which he has given us, that hereafter he will not withhold this potential means of relief from those suffering in the grasp of this (now) too fatal affection. It is one of the most remedial diseases when properly treated; but when managed by arterial sedatives and their aids, stimulants and excess of food, a most fatal one. More than sixty-five years of careful, anxious observation of the effects of blood-letting in pneumonia have proved to me that it has no rival as a remedy for that disease. —*For discussion, see Society Reports.*

ON DISEASE OF THE MASTOID PROCESS.*

By Dr. E. S. Clark,
SAN FRANCISCO, CAL.

I propose to present briefly, a general outline of the conditions, treatment and results of some cases of mastoid affection occurring in my practice the past year and a half and showing the advantage of an early operation. There were sixteen cases treated and of these I operated on fifteen, all resulting in recovery; the other (No. 4) refused an operation and died six days after I first saw him.

The following table will show at once the status, length of treatment, etc., of each case:

It will be seen from the above, that the average duration of middle ear affection before operation (except in the chronic forms) was about five weeks. In eleven of the fifteen cases operated, the discharge ceased after a few days. In one case only (11) does it still continue, and this is a chronic otorrhœa of twenty years standing. In all but four cases there was obtained communication with the middle ear, allowing me to cleanse the ear thoroughly by syringing through the fistula. This com-

	Duration of otorrhœa at time of op.	*Cessation of otorrhœa after op.*	*Com. with mid. ear closed.*	*External wound closed.*	*Condition of memb. tymp. and hearing.*	*Previous hearing.*
N. A. 1	5 weeks.	2 days.	2 days.	15 months.	good, h = 3 20.	h = 0.
O. B. 2	10 " *	4 months.	4 months.	4 "	destr. by chronic otorrh., h = 0.0.	h = 0.
G. K. 3	7 "	2 days.	1 day.	3 "	good, h = 0.30.	h = 0.
P. 4	few days.	died, 6 days.	.....	no op.	.....	.....
A. B. 5	5 weeks.	1 day.	1 day.	3 months.	good, h = 0.10.	h = 0.
F. A. 6	1 day.	4 "	1 "	3 "	good, h = 0.50.	h = 0.01
G. B. 7	1 week.*	4 weeks.	1 "	1 "	destr. by chronic otorrh., h = 0.30.	h = 0.02
F. 8	18 years.	4 days.	4 "	2 "	destr. by chronic otorrh , h = 0.00.	h = 0.
N. S. 9	3 weeks.	7 "	no com.	1½ "	good, h = ?	h = ?
J. L. 10	2 days.	11 "	"	1½ "	good, h = 0.40.	h = 0.05
J. W. 11	20 years.	still continues.	2 days.	4 "	destr. by chronic otorrh., h = 0 00.	h = 0.
A. H. 12	6 weeks.	3 days.	no com.	1¼ "	good, h = 0.05.	h = 0.
M. W. 13	few days.*	2 "	"	1¼ "	destr. by chronic otorrh., h = 0.01.	h = 0.
C. K. 14	8 months.	3 months.	3 weeks.	1½ "	destr. by chronic otorrh., h = 0.10.	h = 0.
S. 15	2 weeks.	1 day.	1 day.	still under treat	good, h = 0.10.	h = 0.
J. D. 16	6 "	2 "	1 "	" " "	good, h = 0.20.	h = 0.

*Read before California State Medical Society.

†In these cases there was a relapse from a chronic otorrhœa.

munication closed in one to four days, in all but two cases (2 and 14). The external wound closed in from one to four months, except the first which remained open fifteen months, and the last two cases still under treatment. After recovery the memb. tymp. (except when destroyed by chronic otorrhœa) was always somewhat thickened, and the hearing from 0.10 to 0.50; very good considering the previous condition, which was in ten cases h. = 0.0.

In case 1, a second operation was necessary, to close the external wound. In case 2 the discharge from middle ear continued for four months, ceasing about the same time the external wound closed.

Affection of the bone resulted from chronic otorrhœa in two, from acute relapse of chronic otorrhœa in three, and from the acute form in the remaining eleven cases.

Case 14 a child of five years had scarlet fever, followed by bilateral otorrhœa; a swelling appeared on mastoid region of left side. This was opened by the attending physician, but the parents evidently neglected the child, for when brought to me, eight months later there was visible behind the left ear a large circular opening two ctm. in diameter, showing denuded bone, which proved to be a sequestrum of the entire mastoid process and adjacent osseous tissue. This after removal and thorough disinfecting resulted in a perfect cure in three months with hearing h. = 0.10 (bilateral) the memb. tymp. showing only a small perforation. In this case, both ears being affected, there was before the operation, almost total deafness, the child hearing only a loud voice; while at the close of treatment, she could hear on either side, ordinary conversation in six meters. Case 15 is interesting in that the patient, a physician, would take no anæsthetic, and the operation was made with no assistance except himself. There was no swelling of the mastoid region, nor the slightest pain on pressure, yet the necrosis was probably more extensive than in any of the other cases.

The method of operating followed by me is to use Schwartze's chisels until pus is reached (usually 1 to 10 m. m. in depth) then smooth out the cavity with scoops, syringe with solution of carbolic acid or sublimate, and iodoform dressing.

The treatment is to cleanse daily with disinfecting solutions and when the external wound is sufficiently closed to apply a conical lead nail, gradually reducing this in size until it is finally left out and in a few days the wound is closed and patient dismissed.

It may be stated here that in no instance has this operation resulted fatally, notwithstanding that two cases (2 and 8) were in a semi-delirious state when operated and could not possibly have survived a delay of twenty-four hours.

GUN-SHOT WOUND OF THE STOMACH—REPORT OF A CASE.*

By A. A. SMITH, M. D.,
HAWKINSVILLE, GA.

Through the courtesy of Dr. A. N. Peurifoy, who was the attending physician, I am permitted to make a report of this case.

On 28th day of February last Dr. Peurifoy was called to see a negro, who in a difficulty with another negro, had received a pistol shot said to be in the stomach.

On arriving and after making an examination, the doctor found that in the fight which had occurred two hours previous, his patient, a boy, eighteen years of age, had received a wound directly over the stomach. A casual examination with the eye alone was all that was necessary to show that the ball had penetrated the cavity of that organ. Not being satisfied, however, he made a careful and cautious examination with the probe and found that the ball had entered at a point about two inches below, and to the left of the tip of the ensiform cartilage of the sternum. The probe passed readily into the cavity of the stomach, and the doctor supposing that the ball had passed through and lodged in some other position of the body did not pursue the examination further. When first seen morphine was administered hypodermically to relieve pain which was severe at the time, also instructions were given to use cold applications to the wound together with such other general instructions as was thought best. On

*Read before the Georgia State Medical Association, April, 1892.

the following day the doctor returned expecting to find a well developed case of traumatic gastritis with peritonitis. In this however he was mistaken as the pulse was 80 and temperature normal and no indications of any inflammatory process, whatever. At this visit the cold applications to the wound with morphine to relieve pain should there be any was continued, also instructions were given that in the event the bowels should not act, that two cathartic pills be given. On the third visit, which was about 48 hours after the boy had received the shot, he ascertained that there had been two or more free evacuations from the bowels, and to his great surprise the ball had passed with one of these evacuations.

M. Anderson, on whose place the difficulty occurred and for whom the negroes were working at the time, was immediately called by the mother of the boy and shown the ball. The wound healed by first intention, and just one week from the date of the injury the boy returned to his work, which was that of laboring in a saw-mill.

This is an unusual case and can be accounted for only on the theory that the ball was spent when it entered the cavity of the stomach, and dropping became mixed with the food and passed out as as other foreign bodies, such as coppers, nickels, buttons, etc., which enter the stomach by the mouth. Another fact to be noted in connection with this case, is in reference to the particular point where the ball entered, which, as already stated, was below and to the left of the ensiform cartilage of the sternum. This would indicate that it penetrated at or near the cardiac orifice and there being none of the contents of the organ in contact with the walls at this particular point did not allow any escape of food, which, had there been any, would have been attended with fatal results.

There were no special features in the management of this case, in fact there could be nothing done except to relieve pain and await developments. I omitted to state in the beginning of this report that the pistol used was what is known as the old style Smith & Wesson revolver 32 calibre, and the distance the parties occupied was about ten spaces apart, also that I have the bullet with me which I will take pleasure in showing should any gentleman desire to see it.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting, April 13, 1892.

Dr. Hiram Corson read a paper on

PNEUMONIA AND ITS TREATMENT. (SEE P. 765.)

DISCUSSION.

Dr. William Pepper: I think great praise is due to Dr. Corson for the faithful and able manner in which he has kept before the profession the importance of blood-letting in certain conditions of disease, and especially in pneumonia. While not prepared to admit its necessity as a remedy in all cases, I must state that I find myself confronted—not rarely—with a group of symptoms indicating oppression of the heart, and approaching cyanosis, which yield to prompt and moderate venesection as to no other remedy. So that with continued caution, but, on the whole, with increasing frequency and confidence, I find myself resorting to it.

Dr. James C. Wilson: We must all regret the absence of Dr. Corson to-night; we shall certainly in the discussion miss his firm convictions, his ready retort, his wit, and the results of his ripe experience in this matter, which for so long a time has been so near his heart. It is certainly most interesting to hear this paper, a continuance of a series of papers in which this determined, clear-headed man at the age of ninety years continues to uphold his position in regard to the treatment of pneumonia. In listening to the paper it has been impressed upon me that I am in neither of the camps referred to by Dr. Corson. I must indorse what has been said by Dr. Pepper in regard to venesection. We all recognize the occasional necessity for venesection in the early stages of croupous pneumonia. It often gives relief from urgent dyspnœa and pain, and sometimes even appears to save life. It cannot, however, be regarded as a specific treatment. It must be considered as symptomatic. I do not find myself in the camp of those who are prepared to adopt venesection as a routine treatment in pneumonia. On the contrary, I feel that my experience is opposed to this or any routine treatment.

I find myself equally out of place among those who rely upon the group of remedies known as arterial sedatives. I read from a paper* which embodies some views that I have expressed in regard to the treatment of pneumonia.

The paper speaks of various methods that have from time to time been largely employed and have gradually fallen out of use.

"In the same manner we condemn the treatment by tartar emetic in large doses, and with it is to be relegated to the limbo of discarded medicaments in pneumonia Trousseau's lauded *kermès*. The treatment by large doses of veratrum viride in the early stages, which still survives and finds in many quarters earnest advocates, is based upon the same antiphlogistic idea and has little to commend it. To add the depressing effect of a powerful drug to the pathological influences already depressing the heart is now recognized as increasing the danger of cardiac failure. In fact, if as our knowledge of croupous pneumonia indicates, many of the symptoms are due to a toxæmia, it were better to bleed the patient, if he is to be bled at all, into a basin than into his own vessels. To depress the heart by veratrum viride or aconite in the first stage, and to harass it by digitalis at a late period are among the vagaries of a therapeutics which takes pleasure in vaunting itself as rational. To give cardiac depressants in croupous pneumonia is always of doubtful expediency, and digitalis as a cardiac stimulant should be administered only in response to special indications. Of the latter drug Brunton says, 'It is of little use in pneumonia.'"

The difficulty of determining the value of treatment in pneumonia, it appears to me, lies in our inability to estimate the part played by treatment in the ultimate results in a large collection of cases.

"Croupous pneumonia occurs with great frequency in connection with other diseases. It is not uncommon during convalescence from acute infectious processes. Those who suffer from Bright's disease and from valvular and degenerative diseases of the heart and from organic diseases of the nervous system are especially prone to it. It not unfrequently occurs as the terminal condition in these affections and in other constitutional diseases, such as diabetes mellitus and pulmonary phthisis. Under these circumstances, it preserves, however, its own clinical and anatomical characters, and must be regarded, not as a mere complication of preëxisting pathological processes, to which it has no essential causal relation, but as an entirely independent intercurrent disease.

"When we consider the modification of pneumonia under the existing circumstances and in the different periods of life from childhood to old age, and in alcoholic subjects, we are impressed with the uselessness of attemps to show by statistics the value of different plans of treating the disease. No general percentage of mortality can be relied upon as indicating the efficacy of a treatment, unless they are on a large scale and in connection with a critical analysis of the condition of the patients. It is a question of the seed, which is probably always the same, and the soil, which is definitely modified. The only reliable test of the value of treatment is its effect upon the general course of the disease, a test which is much influenced by the personal equation of the observer. For this reason plans of treatment once in vogue, credited with surprising results in reducing the mortality of the disease, have failed to stand the test of time and have passed into disuse. And while the profession unites in striving after some specific treatment for other infectious diseases, the present drift of opinion in regard to croupous pneumonia seems by common consent to be in the direction of a vigilant expectancy with active treatment of symptoms as they arise.

"Whether we regard acute lobar pneumonia as a specific inflammation, or, in the language of the day, as an acute infectious febrile disease, of which the pulmonary lesions are merely a localization, we recognize in its causation three factors—a pathogenic bacterium, a predisposition, and an exciting cause—in other words, the seed, the soil, and the implantation. Nothing in the process is more obvious than its specific nature.

"Pneumonia cannot be regarded as a simple inflammation. This being the case, the antiphlogistic treatment of former times scarcely deserves discussion. Indiscriminate blood-letting as a routine treatment for a specific pathological process, the natural history of which shows it to

*The Medical News, December 20, 1890.

be self-limited and of comparatively short duration, is not in accordance with modern therapeutic principles. Still less are repeated venesections and bleeding *ad deliquium.*"

It seems to me that we are fighting over the old battles that were fought almost a century ago in regard to the antiphlogistic treatment of fevers. No one now regards typhus or enteric fevers as inflammatory diseases. No one regards scarlet fever as an inflammatory disease, yet we know that toward the close of the last century and in the early part of the present century, when fevers were considered to be varities of *the* fever, fever was considered to be a manifestation of inflammation, and not only was its treatment by venesection discussed, but it was pretty generally practiced. Almost all physicians of a generation later than that of our distinguished friend have come to regard pneumonia as a specific infectious process. Nobody now holds that a specific disease shall be treated by venesection. We have here to deal with a self-limited disease, a disease of short duration, and a disease which, in the majority of cases, tends toward recovery. To bleed as a routine measure is to add in a large number of the cases that come under our care the ill-borne effects of depletion to the debilitating influence of a specific inflammation attended with a depressing toxæmia. Therefore, it seems to me that it is scarcely worth while to oppose a plan of treatment based upon a conception of the pathology of the progress which is no longer tenable.

To bleed, however, for the relief of the dyspnœa, to bleed for the over-distended right heart, is not only clearly a duty in certain cases, but I believe that it is a duty which is often omitted to the disaster of the patient. I myself have had unfortunate results in the cases of pneumonia that I have bled. I have bled but few cases—they probably do not number more than four—and every case that I have bled I have lost. I have bled freely and without hesitation.

In the treatment of pneumonia we must pursue a plan of vigilant expectancy. I am opposed to the use of large doses of digitalis in the latter stages, during the period spoken of as that of red hepatization, after the exudate has undergone coagulation and has established in one lobe or in the whole lung a marked obstacle to the circulation. It seems to me that the use of digitalis under these circumstances throws work upon the heart which is unnecessary, and tends further to harass it. In regard to the expectant treatment, the whole history of the disease, viewed from a standpoint of its specific nature, seems fully to justify in the present state of our knowledge an armed expectancy ; a method of treatment in which, on the one hand, stimulation is not practised, and on the other hand, depletion is avoided, in which there is relief of the symptoms with a use of proper hygienic measures, and the disease is allowed to run its course just as we feel obliged to allow the other self-limited infectious diseases to run their course.

Dr. J. M. Anders : In the first place I think that Dr Hiram Corson is to be congratulated heartily upon the uniformly good results obtained from free bleedings, and, in the second place, he is especially to be admired for his courage in bleeding during these long years, indiscriminately, and without hesitation. Now there are a great many men, it is true, who are not in the same camp with Dr. Hiram Corson. The speaker who preceded me stated that he was not in favor of indiscriminate bleeding, and that he bled simply for subsidiary reasons and purposes. In that opinion I heartily concur. But, gentlemen, the results of bleeding, as practised by Dr. Hiram Corson, are certainly unparalleled for excellence; and, hence, it will not do to say that his cases got well in spite of treatment, on the one hand, nor to say that these cases would have gotten well without treatment, on the other hand. It, therefore, seems to me that we are put to the task of finding an explanation for the good results of repeated large bleedings in the hands of Dr. Hiram Corson.

I have myself bled but very few patients with pneumonia. About ten years ago I promised Dr. Hiram Corson that I would bleed my pneumonia patients, which promise I have kept only in part. Soon after that I met with a case of sthenic type in a male about forty years of age, with full, boundiug pulse, flushed face, high arterial tension, and marked nervous excitement. I withdrew about twenty ounces of blood. This seemed to quiet the heart, diminish arterial tension, and

allay the nervous excitement, and the patient made a rapid and good convalescence. Sometime afterward I met with another case in which I tried bleeding, but with a fatal termination. This case was not of purely sthenic type, nor was it one, strictly speaking, of asthenic type. It seemed to occupy a middle place. I withdrew about twenty ounces of blood and did not repeat the bleeding. Now, according to the remarks of Dr. Corson, I probably bled timidly. I saw a third case in which blood-letting was performed, in the wards of the Episcopal Hospital. This case in the hands of a colleague, and I agreed with him that bleeding might be of some service, although the patient was practically moribund when the procedure was resorted to, and it reached a fatal termination in a short time. The cause was one of sthenic type, with more or less congestion around the seat of consolidation, which evidently had been followed by œdema.

The chief reason—at least so it seems to me—why Dr. Hiram Corson's results have been so regularly favorable is the fact that patients living in the country and suffering with pneumonia, generally present the sthenic type of the disease, while, on the other hand, cases occuring in large cities like Philadelphia, very generally do not present the sthenic type, but rather the asthenic adynamic type. When a patient or the sthenic type presents himself, it seems to be far better to bleed than to give arterial sedatives—better than to give veratrum viride or tincture of aconite. The bleeding will most certainly quiet the heart's action, lower arterial tension, and allay more or less the nervous excitement, and will remove a portion of the burden from the heart without robbing it of much, if any, of its power. It is true that veratrum viride or tincture of aconite will also relax the bloodvessel walls, will also quiet the heart, but all of the indications fulfilled by these drugs, and I say it without hesitation, do so at the expense of heart power. The same is not true of blood-letting—at least, not to the same degree. Veratrum viride and tincture of aconite, while relaxing the vessel walls, also act as cardiac depressants.

I gather in the next place, that Dr. Hiram Corson has had good results from blood-letting in the second stage of the disease. It is hard to understand how bleeding at this stage can be of benefit, unless, as Dr. Wilson has explained, under certain circumstances, we thereby relieve an over-distended and dialated right heart. On the other hand, it is to be remembered that in the second stage of pneumonia, as in the first, the fibrin factors of the blood are three-or-four-fold what they are normally. Hence, under these circumstances, large bleedings, by diminishing this tendency, will lessen the liability to the formation of cardiac thrombi, and, to my mind, cardiac thrombi are frequently the chief cause of a fatal termination. At all events, thrombi are followed by dialated right heart, venous stasis, and death.

I do not believe that blood-letting exerts any good local effect in the second stage. The only way in which bleeding can affect favorably the lung is when we have such complications as congestion around the seat of consolidation, followed by œdema. Bleeding then acts according to ordinary hydraulic principles, and only in this way.

The method pursued by myself in the treatment of pneumonia is very briefly as follows, and in stating the method which I have pursued for a number of years, I shall perhaps bring out a few points bearing upon the paper of the evening. During the first stage of pneumonia, as I have already said I have bled a couple of times. My usual method, however, is to give morphine hypodermatically as recommended by Dr. Alfred Loomis, of New York. Perhaps the chief reason that I have not bled is because I have not met with a purely sthenic type of the disease. During the past winter I, however, saw two cases that apparently belonged to this type, but as they both followed la grippe, I was timid and did not bleed. Since they have died, I have regretted that I did not bleed them. I give morphine in doses of one-sixth to one-quarter of a grain repeated every eight or twelve hours. Morphine fulfills several indications fulfilled by blood-letting: it quiets the heart's action, it relieves pain, it guards the heart, and at the same time gives rest and comfort to the patient. In addition to morphine, or if it does not suffice to allay arterial tension, I use local blood-letting, applying several leeches and withdrawing six to eight ounces of blood, and repeating this if necessary. If leeches be not convenient, I sometimes resort to wet cups, withdrawing about the same amount of blood. It is hard to explain

the effect of local blood-letting on physiological grounds, yet of the efficacy of this method I am thoroughly convinced. It does diminish arterial tension and nervous excitement and gives relief from pain.

In the second stage of pneumonia the indications, so far as the local trouble is concerned, are, it seems to me, the reverse of what they are in the first stage. In the first stage, the bloodvessels are dilated, but in the second stage the bloodvessels are, as a rule, compressed. Their lumen is diminished. The obstruction to the pulmonary circulation is greater than in the first stage. In the second stage the indications are for the use of stimulants, but alcoholic stimulants should be supplemented by the administration of strychnine. Strychnine certainly fulfills certain indications not met by alcohol. Especially should we note its effect on the vasomotor and respiratory centers. If strychnine and alcohol fail to relieve the heart, then I resort to digitalis. I do believe that digitalis increases the capacity of the heart for work. Since it slows the heart's beat, it also allows time for the heart to carry on its nutritive functions. When the digitalis fails to whip up sufficiently the flagging heart, and venous stasis goes on increasing, then I administer oxygen by inhalation. During the last stage I use the stimulating expectorants, and where resolution is delayed nothing is better than turpentine.

I shall not take up the time any longer; but I wish to say, in conclusion, that the Society is indebted to Dr. Hiram Corson for having produced this paper, and for calling renewed attention to a measure which has been too much neglected in recent years.

Dr. H. C. Wood: I should not speak to-night did I not think that there was great danger that, in the lack of clear thinking, we were perhaps losing lives. I do not propose to do more than to make a few comments upon what has been said by my friends Dr. Wilson and Dr. Anders. I am always afraid of rhetoric in a scientific discussion. When I hear of such things as a heart being "harassed" by digitalis and similar expressions, I always begin to fear that the science is in inverse proportion to the rhetoric. Now, how can digitalis harass the heart? Much more, how can it exhaust the heart? You might as well talk of exhausting a starving man by a dish of broth, as to talk of exhausting a heart by giving digitalis. Digitalis adds power to the heart. That is an absolutely proven physiological fact. It lessens the nervous irritation of the heart, and at the same time increases the length of the diastole and the force of the systole; far from harassing the heart with digitalis, you quiet the heart that is already harassed by disease.

Then, again, we have heard that the heart is laboring with an obstruction, and therefore we must not give digitalis. That is the very reason why we must give digitalis. You have one-fourth of a pair of lungs obliterated—that means that one-fourth of the lumen of the vessels is shut off, so that the heart must force the normal amount of blood through three-fourths of the normal space. Of course, under such circumstances, the vessels and the right side of the heart must be oppressed. The heart is weakened by starvation and disease, and it finds itself in the presence of narrowed channels. Digitalis aids us in advanced pneumonia, because there is obstruction, and because the right side of the heart feels the power of the drug. We know by clinical experience the value of digitalis. Statistics are fallacious; but there is a kind of test that is not fallacious. If you take a man dying with a feeble, thready pulse, scarcely alive, and raise him up with digitalis and get the long, strong pulse, and then take away the digitalis and see him drop; give the digitalis again and lift him up again; then let him drop again and lift him up again, you have proof that the digitalis does control the circulation. You know that it does do good. Moreover, in advanced pneumonia, when properly used, digitalis has no power for evil. The real difficulty in its use in pneumonia is that, somehow, high temperature interferes with its action. When there is high temperature in pneumonia, the heart muscle often will not respond to digitalis.

Now a word to my friend Dr. Anders. He spoke in regard to blood-letting and arterial sedatives, and said that you take power out of the heart by arterial sedatives, but that you did not take power out of the heart by blood-letting. Let us make an experiment: give a man daily doses of veratrum viride and keep the pulse down for twenty days, and then take a man and remove twenty ounces of blood

each day for twenty days. Which heart would come up the strongest at the end of this time? It is essential, in the practice of medicine, to distinguish between depression and exhaustion. Blood-letting exhausts a man—it takes power out of a man. It leaves the man something less than before. Does veratrum viride take any power out of a man? It lays its hand upon the heart and vasomotor centers, and binds them down with strong thongs. The man is there, and when the thongs are cut—*i. e.*, the depression removed—he rises up as strong as ever.

Dr. C. McClelland: I should like to say one word from my personal experience. Something over two years ago I had an attack of pneumonia; both lungs were involved; the heart was depressed, dropping every third beat, and valvular murmurs were present. The mind was clear. I said to the physician in attendance: "This kind of thing cannot last more than twelve hours. Can nothing be done? How about digitalis?" He agreed to try digitalis. It was used vigorously and in such large doses that one of my attendants remained all night to watch the effect. Inside of eight hours the beat of the pulse was strong, the intermissions had practically ceased, and the valvular murmurs had disappeared. I believe that had it not been for digitalis I should not be here to tell the story.

Dr. Judson Daland: I have been quite interested in the treatment referred to, but I think that the ordinary cases of pneumonia—as we all see them in the majority of uncomplicated cases—may go on to a satisfactory result. I have been much impressed with the fact during the last two years. In the first place, as has been said by Dr. Anders, when death occurs it is usually directly through the right heart. We have an increase in the amount of blood in the venous system and over-distention of all the veins and dilatation of the right heart, with death following from failure of the right heart. Four autopsies made during the past year showed this condition very conclusively. It seems to me very certain that if we abstract blood directly from the median basilic vein we directly drain the blood from the right heart and lessen venous stasis and take off the labor from the right heart and prevent death from heart failure. This, I take it, is an important indication for blood-letting.

Furthermore, as has already been said, heart-clot is unquestionably accountable for many deaths. It has often been said that in pneumonia the blood has an increased tendency to coagulate. This fact has not been appreciated with sufficient clearness. About eight months ago I had occasion to examine the blood of several cases of pneumonia, and at the same time was examining blood from other diseases, chiefly diseases without fever, and I was strongly impressed by the fact that in every case of pneumonia, when I attempted to examine the blood it would coagulate in the capillary pipette with great rapidity, and it required special manipulation in order to make the examination. It seems to me that if the right heart and venous system is over-filled, a condition favoring the condition for this coagulation, I think that physical signs of dilatation of the right heart should be searched for, and that we should not wait until cyanosis develops. In two cases of pneumonia where the right side of the heart was dilated and the veins overfull, the physician insisted upon waiting for cyanosis. Cyanosis did develop, and at the same moment death occurred. I think that if the physical signs can be made out, and with it are associated symptoms, venesection should be promptly performed.

Dr. S. Solis-Cohen: I arise to call attention of the Society to the usefulness of the nitrites in the treatment of pneumonia. Some of the remarks in discussion, especially those of Dr. Wood, might at once have suggested to those familiar with the physiological properties of the nitrites the great power that this class of drugs can and does have in the treatment of diseases like pneumonia. I am not speaking of the management of conditions directly dependent upon the specific poison of the disease, if there be such a specific poison, but of what may be done to relieve the embarrassment of the circulation from mechanical stasis due to obstruction in the lungs. Dr. Wood laid stress upon the fact that a large portion of the arterial conduit was wiped out, or better, blocked out. It seems to me an obvious inference that it would be highly desirable to increase the capacity of the remaining portion. Looking on the arterial and venous channels, pulmonic and systemic, as one continuous canal, it is theoretically clear that we must especially dilate the arterial

portion in order that the whole volume of the blood may not accumulate on the venous side; and in order likewise to facilitate the passage of the blood through branches of the main canal collateral to those obstructed. The nitrites—nitro-glycerin, amyl nitrite, sodium nitrite—will dilate the peripheral arterioles, and will dilate the capillaries, increasing the capacity for blood of the arterial side of the circulation, and thus partially compensate for that portion of the arterial channel dammed out by the blocking of the vessels in the lungs. Pulmonic vessels are dilated as well as systemic, and thus the right heart is directly relieved of labor, and the danger of over-distention in large degree diminished. Respiration is likewise relieved, especially if oxygen be given by inhalation coincidently. I have seen this remarkably illustrated, not once or twice, but more than a dozen times within the last two or three years since my attention has been more particularly directed to the subject. This measure alone will not, of course, succeed in bringing about recovery in every case of pneumonia. There are other additional ends to be aimed at by the physician, and I had been hoping to hear attention called to one of them. The increased tendency of the blood to coagulation in cases of pneumonia was dwelt upon, but the value of ammonium salts in maintaining the fluidity of the blood was not spoken of. This subject is not at all new. It was long ago brought to the attention of the profession by the same great man that introduced nitrites, Dr. Benjamin Ward Richardson, of London. Others had, perhaps, used ammonium carbonate and ammonium chloride before him, but he it was who laid especial stress upon the danger threatening pneumonitic patients, of death from heart-clot, and for that reason urged the early and free use of preparations of ammonia to prevent heart-clot by maintaining the fluidity of the blood. He has also called attention to a useful method of administering ammonia in septic conditions associated with fibrinous exudations, namely, by giving the vapor of ammoniated chloroform.

I should like to add one word in regard to the rationale of blood-letting in selected cases of pneumonia. I have seen blood-letting do good by relieving the right heart of distention, and by diminishing the quantity of blood which the enfeebled heart has to push through the much-diminished caliber of the vascular channel. There are two ways of taking a portion of its labor from the heart: one is to dilate the arterioles, thus increasing the vascular capacity and diminishing the vascular resistance—the agent used for this purpose being a nitrite—and the second is to diminish the quantity of blood which the heart is called upon to propel and the vessels to conduct. It has been said that the loss of twenty ounces of blood is a serious matter to the enfeebled patient. That depends on where the blood is, what its condition is, what it is doing. A portion of the patient is thrown out of functional relation, and a normal quantity of blood becomes relative plethora. It is of no good to the patient while it stagnates in his viens. It does not nourish him, and it does interfere with the passage of the nutrient fluid into the tissues. He is a great deal better off without these twenty ounces if he is unable to make use of them, if they contain toxic products, if they are simply blocking the lungs and veins, and finally blocking the arteries. They antagonize the heart—first the right heart, then both sides; they do no good; they are not, to use Dr. Wood's comparison, liquid food to nourish; they are liquid poison to kill, and the sooner the patient gets rid of them the better his chances for recovery.

Dr. A. E. Roussel: In connection with the use of digitalis, it may be interesting to note the results obtained by Professor Pétresco, reported in a recent number of the *Bulletin de Thérapeutique*. [See editorial in the Reporter of Dec. 12, 1891.] He gives an analysis of over seven hundred and fifty cases in which he used large doses of digitalis—as high as two drachms of the leaves in twenty-four hours—irrespective of the stage of the malady. The mortality was a trifle over one per cent. He claims that the pulse-beats are reduced from 120 or 130 to 28 or 30 per minute, and the temperature also seems to be favorably affected, falling four or five degrees; besides which, it is said that the entire course of the disease is jugulated in so short a time as three or four days. The publication of such a large series of cases seems to require a careful study of the matter. We have all been in the habit of giving digitalis in the second and third

stages of pneumonia, and this report would bear out the statement that digitalis and carbonate of ammonia are eminently satisfactory modes of treatment.

Dr. Ernest Laplace: I have been very much interested in the discussion, and was hoping that a few more words would be said on the etiology of the disease, so as to give some explanation as to the reason why there are sometimes sthenic cases and at other times asthenic cases, and therefore why bloodletting would be indicated in certain cases and not in others. We know, as was said by the first speaker, that pneumonia is a specific disease; that it needs a special soil and a special seed developing in it. We know that the same seed, developing in a different soil, will produce a disease, but that disease is not necessarily the same in every respect. In the same way we plant a seed in different countries, and it will not produce exactly the same tree in each case. There are as many different soils as there are patients suffering from the disease. As a result of the growth of the peculiar organism we have produced a toxalbumin, or, if you will, ptomaine, which in the patient acts as a heart stimulant, and we have a sthenic case. In such a case gentle bloodletting will relieve the heart of the extra amount of work. It will not cure the disease, and has no tendency to alter it, but makes it less grave than when the blood has not been removed. Where the toxalbumin is not so violent, or is not so abundant, or is of a different physiological action, the heart not being over-stimulated, the disease weakens the patient, and blood-letting is not indicated. In such a case calm expectancy, with readiness to meet the symptoms as they present themselves, is the proper plan of treatment.

Dr. Frank Woodbury: I have been much interested in the discussion, but of course, was particularly attracted, as doubtless many others were, by the paper of Dr. Hiram Corson. The experience of a physician extending over a period of sixty-five years is certainly one that we should receive with great respect, and especially when he possesses the recognized ability as a practitioner such as that possessed by the author of the paper under discussion. While listening to the paper and the discussion, the celebrated advice of Chomel came into my mind, "to treat the patient and not the disease." We have been considering some of the dangers attending a case of pneumonia. The greatest danger to which the pneumonia patient is exposed, in my judgment is to have a man for his physician who is so engrossed with treating the mental abstraction which he calls pneumonia that he connot see the concrete needs of the actual individual patient who claims his care. I entirely agree with the last speaker with regard to the desirability of confining ourselves to the scientific language in a discussion of scientific questions, and the dangers to which we are liable from the abuse of rhetoric when referring to medical subjects. I wish to use only words of truth and soberness, and therefore, will not speak of the heart "putting its shoulder to the wheel" under the influence of a remedy, nor as "harassed" either by a drug or a disease. Being rather deficient in poetic insight or the imaginative faculty, I will even confess that I could never see any "indication" for remedies. The word "indication" is not in my therapeutic vocabulary. Nature never "indicates" to me a drug or a combination of drugs in any morbid state. Experience has shown that patients may be benefited by certain remedies when judiciously administered, but we are not restricted to such drugs, and we are willing to abandon them as soon as others shall be discovered which will cure more "safely, quickly, and agreeably." This we could not do if Nature infallibly indicated remedies. The late Dr. J. Milner Fothergill called attention to the robust countryman at Smithfield and compared him with the pallid clerks and artisans thronging the London streets, and very justly pointed the moral that the line of treatment in these two classes in case of disease must be entirely different. Perhaps this will explain the success of Dr. Corson in a rural community, with his practice of depletion in pneumonia, a practice which our city physicians have been obliged universally to abandon. In spite of the advocacy of the great Dr. Rush and his successors, it has almost become obsolete with us. I think that perhaps we have done as much as we should do for the present, in regard to the classification of diseases, and that we should now begin to classify our patients as the foundation of success in therapeutics. For instance, instead of dividing pneumonia into

sthenic and asthenic cases, I think that it would greatly simplify the problem of treatment if we were to substitute the words plethoric and anæmic. It is easy to make a distinction between plethoric and anæmic patients. Sthenic cases are more likely to occur among the plethoric; asthenic cases among the anæmic. In plethoric cases, or even where the hyperæmia is local, blood-letting is a rational procedure, and when the symptoms are urgent and do not admit of delay, it is practised with advantage, as Dr. Corson has shown. We should not, however, bleed for the pneumonia; as has been already said, we should bleed for mechanical reasons. Where the symptoms are less urgent we may decide to depend upon arterial sedatives and dieting to accomplish the same purpose. In regard to a typical case of pnuemonia, by which I mean an ordinary acute lobar or croupous pneumonia, I might say that I do not recognize congestion as the first stage in the morbid process. Even the premonitory hyperæmia of Stokes must have something to precede it. It is certainly permissible to assume a nervous disturbance, which causes the local hyperæmia; in other words, since efficient morbid influence acting through the vasomotor nerves of the affected lung and the cardiac ganglia, and causing tophic disturbances. The view is now generally held that pneumonia is not an inflammation, but a general disease, if not a "specific fever."

In a plethoric case, or robust patient, I should commence the treatment by that old-fashioned remedy, an emetic, and preferably ipecacuanha, because it is a fact that this emetic tends to produce anæmia of the lung. There is no better arterial sedative than an emetic, and this also quickens the functions of the skin and favors diaphoresis. This I would follow by magnesia sulphate in sufficient doses to produce several watery evacuations of the bowels. In this way, we relieve the overdistension of the blood-vessels. We do not bleed the patient into his own tissues, but into his own bowels. Then I should simply give remedies to make the patient comfortable, and keep him upon a very restricted diet. If there is great restlessness or too much cough I would give small doses of chloral or bromide in preference to morphine. I remember a case where a patient was doing well under small doses of chloral and bromide, I was attending him during the absence from the city of another practitioner who, on returning, took charge of the case and changed the treatment to Dover's powder, with the result that in the course of a couple of days, the patient died. I think that many deaths in pneumonia are really due to opiates, and, in the beginning, they are inadmissable, just as in the early stages of bronchitis.

An anæmic case of pneumonia I should treat entirely differently. Here I should give restoratives and broths, and depend upon nursing more than upon medicines. I would give digitalis and quinine, and perhaps iron, but in such cases supporting the strength of the patient is far more important than any special drug, and bleeding is not to be considered.

As we know that a large majority of the cases of pneumonia get well under any and every form of treatment, we are tempted to echo the advice of Chambers with regard to rheumatism, "to cover up the patient with blankets and leave him alone," which, in fact, is about what Jürgensen advises in pneumonia. Unless we have certain symptoms that give annoyance, pain, or suffering, I think that the vigilant expectant treatment advocated by Dr. J. C. Wilson in opening this discussion, not too actively interfering with the course of the disease, will give the best results in the greatest number of cases. Where the emergency arises and the patient is suffering from acute plethora, or distension of the right heart, or overwhelming congestion of the lung, I should bleed just as if the patient did not have the pneumonia, but I would never bleed for pneumonia. The routine practise of venesection in this disease has never recovered from the death-blow it received at the hands of J. Hughes Bennett. At the same time, I can understand that the emergency may sometimes arise when the abstraction of a certain amount of blood will afford great immediate relief to the patient, without being followed by any serious consequences as regards the subsequent course of the disease.

Dr. John B. Roberts: It may seem presumptuous for me, who see comparatively few medical cases, to speak on this subject. I have, however, bled in a few cases of pneumonia. I now recall four cases, of which three recovered and one

died. It is, however, not fair to the Society nor to statistics to quote these cases together. They are divided into two distinct classes. The first class contains cases of traumatic pneumonia, which I see in surgical practice. They are usually of the sthenic character, and in them at times the engorgement of the lungs, from acute traumatic pneumonia, demands depletion. The second class of cases in which I am inclined to bleed are cases similar to those spoken of by Dr. Anders, in which, in addition to a pneumonia, there is overwhelming of both lungs with what might be called œdema of the lungs. These are cases in which the presence of moist râles indicate that the smaller bronchial tubes, and possibly the vesicles where they are not filled with the croupous deposit, are filled with mucous or serous fluid, thus preventing respiration. The patient is cyanosed, gasping for breath, and *in articulo mortis*. These cases should be bled. I have bled two of them and one has recovered. The other two cases of my four already mentioned, were instances of traumatic pneumonia in which I think that there is no question that a moderate bleeding of from eight to ten ounces or less (I have never removed many ounces) was of service. One was a case of gunshot wound of the lung followed in about twenty-four hours with violent dyspnœa, orthopnœa, and all the symptoms of acute pneumonia. I at once bled and he was relieved; the symptoms disappeared and he rapidly recovered, notwithstanding the fact that he had a bullet in the chest. The second case was that of a man who had been run over by a wagon, had several ribs broken, a pneumonia following from punctured wound of the lungs by the ribs. He was bled, with a satisfactory result. Of course, we must separate these cases into two groups—those of traumatic sthenic pneumonia, and those in which there is overwhelming of the lungs and the patient threatened with drowning in his own secretions. In the latter case the abstraction of blood gives the lungs an opportunity to be relieved, lessens the engorgement of the right heart, and permits respiration to be properly carried on.

Dr. George N. Highly: I have listened with a great deal of pleasure to the remarks that have been made, and I feel very thankful for the favorable comments which this paper has elicited. With regard to pneumonia being a general disease, we differ from the many eminent men who hold that view. We do not think that this has been proven. Because it is accompanied by certain constitutional disturbances, is no reason for regarding it as a specific disease. We know that local troubles when similarly situated pursue like courses, and when extensive are accompanied by constitutional symptoms in proportion to their extent and gravity. But whether we regard pneumonia as a local disease or as a local manifestation of a general disease, we must agree that the condition present demands relief by measures which will unload the lung and the right side of the heart, and we think that venesection does this with the greatest amount of relief and the least amount of depression. A word in regard to bleeding in the so-called asthenic cases. Out in Conshohocken we do not see such cases. We regard the condition as precisely the same in all our patients, whether robust or weak, or run down by disease. I know of one case, a woman with an ovarian tumor weighing sixty pounds, for which she had been refused operation. She was taken with pneumonia and her physician attended her for a few days; the disease had progressed to the second, and perhaps to the beginning of the third stage. Dr. Corson was called in consultation and advised venesection, which her attending physician had hesitated to perform on account of her great weakness. Twelve ounces of blood were removed with relief of the symptoms, and from that time she did not expectorate any more of the rusty colored sputa. That was a remarkable case and I could give the full notes if there were time. I refer you also to the case of Dr. Michener (*Med. and Surg. Rep.*, July, 1882), who, at the advanced age of eighty-seven years, and while suffering from a fracture of the arm, was attacked with pneumonia. He directed the attending doctor to "bleed until the pulse gives way and the respirations become easy without regard to what may be in the basin." This was done and relief soon followed. The amount taken was ℥xv.

About bleeding in the third stage. Dr. Corson's idea is that there is always some stage of congestion in part of the lung. If you could conclusively show that the area first affected did not extend with each succeeding day, and that the parts in-

volved simply went through the several stages without further extension, then it would be true that venesection would be harmful after the first or second stage. We think, however, that in every case and in every stage of the disease, until the crisis has been passed, new portions of the lungs are continually being involved, and for these new areas of congestion and inflammation blood-letting is of value.

SELECTED FORMULÆ.

PROPHYLAXIS AND TREATMENT OF SORE THROAT.

The following is recommended by Capart (*Nouveaux Remedes*):

(*a*). *Prophylaxis.*

℞ Crystallised phenic acid.....5 grammes.
Absolute alcohol .....10 "
Essence of peppermint.....10 drops.
M. Sig. Place 10 drops in a cup of hot water and employ it as a gargle night and morning.

(*b*). *Treatment.*

℞ 1. Decoction of willow..15 to 200 grammes.
Salicylate of sodium. 2 to 5 "
Biborate of sodium... 5 grammes.
M. Sig.—For internal use.

℞ 2. Calcined silica..... 1 gramme.
Alcohol,
Glycerine.....,. āā 10 grammes.
Water.....200 "
M. Sig.—For gargles.

—*Journal de Medecine de Paris*, March 27, 1892.

FOR STRIDULOUS LARYNGITIS.

In the treatment of this affection, the following is highly recommended:

℞ Chloroform.....5 to 10 drops.
Water.....25 grammes.
Glycerine..... 5 "
M. Sig.—A dessertspoonful every half-hour.

—*Journal de Medecine de Paris*, March 27, 1892.

FOR MARGINAL EXFOLIATIVE GLOSSITIS.

Besnier recommends the following combination:

℞ Cocaine.....0.05 gramme.
Balsam of Peru,
Boric acid..... āā 1.00 "
Vaseline.....40 grammes.
M. Sig.—Apply externally.

—*Revue de Laryngologie, d'Otologie et de Rhin.*, April 1, 1892.

HYPERIDROSIS.

℞ Sodii borat.,
Acid. salicyl.. .....āā grams 7.5
Acid. borici..... " 2.
Glycerin.,
Alcohol.....āā " 30.
M. ft. linim. Apply to hands thrice daily.

SYRUP FOR CHILDREN.

In the treatment of diseases of children the following is recommended:

℞ Creasote..... 5 grammes.
Alcohol, 90 per cent.....125 "
Glycerine ..... 50 "
Syrup of tolu .....250 "
Laurel water,
Distilled water.....āā 40 "
M. Each dessertspoonful contains five centigrammes of creasote.

—*Journal de Chirurg. et Therap.*, No. 11, 1891.

A NEW DIURETIC REMEDY.

Pichi (*Fabiana imbricata*) a new diuretic, and which also has a sedative action upon the vesical and urethral mucous membrane, is recommended in the following formula:

℞ Fluid extract of pichi..32 grammes.
Nitrate of potassium... 4 "
Distilled water.....90 "
M. Sig.—A dessertspoonful every three hours.

—*La Medecine Moderne*, April 7, 1892.

INFANTILE DIARRHŒA.

For thin, greenish, slimy stools, Dr. Meigs orders:

℞ Acidi sulphurici dil.....gtt. xij.
Morphinæ sulph.....gr. ¼.
Spir. vini gallici.....℥ ss.
Syr. zingib.....℥ ss.
Aquæ.....q. s. ad ℥ iij.
M, Sig.—One drachm every three hours.

EXPECTORANT.

℞ Ammonii et potass. tart.....gr. i.
Ammonii muriat.....℥ iv.
Ext. glycyrrhizæ.....℥ i.
Morphinæ muriat.....gr. i.
Syr. tolutan.....℥ i.
Ag. laur. cerasi.....℥ j.
M. Sig.—Teaspoonful every two or three hours.

—*Bartholow.*

SORE THROAT.

A gargle of hot claret often affords much relief in cases of acute catarrhal pharyngitis. Where the inflammation is rheumatic in character, a spray of the following is useful:

℞ Morphinæ.....gr. iv.
Ac. carbolici,
Ac. tannici.....āā ʒ ss.
Glycerini,
Aquæ dest.....āā ℥ iv.
M. Sig.—Use as a spray in the throat, about a teaspoonful at a time.

—*Med. Record.*

HERPES PRÆPUTIALIS.

A dusting powder employed by Besnier is:

℞ Acid. tannic. pulv.....grams 5.
Bismuth. subnitr.....gram 1.
Amyli..... grams 100.

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LEADING ARTICLES.

THE PREVENTION OF BLINDNESS FROM CONTAGIOUS OPHTHALMIA.

Many of the causes of blindness are operative chiefly or wholly in middle or advanced age, when perhaps the greater part or whole of the active working life has been passed in the possession of normal visual power, or at least after visual impressions have played their full part in the mental development of the individual. Blindness from birth or from childhood is a very much more serious matter, since it deprives the individual of a most important group of powers by hindering their development, and impoverishes the community by crippling one of its possible workers throughout the whole of his productive life.

Statistics indicate that of all cases about twenty to thirty per cent. are due to contagious inflammations of the conjunctiva, and in a large proportion of these the blindness is produced in early infancy or childhood. The contagious ophthalmias that cause blindness may be classified into two groups: ophthalmia neonatorum, which causes blindness solely in the first few weeks of life; and trachoma, which in this locality is seen mainly among the inmates of orphan schools and asylums, or where children are crowded together in tenement houses. Blindness from these causes comes through disease of the cornea leading to its opacity, and is generally quite irremediable; so that the hope of diminishing it lies almost entirely in the direction of prevention. In this case prevention may be accomplished either by the prevention of the diseases which cause the blindness or by management of them in such a way that blindness shall not result.

In these days when disease-producing germs, the isolation of cases, and the methods of disinfectant treatment claim

so large a share of professional attention, ophthalmologists have taken a renewed interest in ophthalmias, the chronic forms of which had been regarded as the most tedious, laborious and unsatisfactory conditions with which they had to deal.

With regard to causative germs, ophthalmological bacteriologists have contributed comparatively little to the general fund of positive knowledge. A few who have undertaken systematically to search for bacteria have established the presence of the gonococcus in ophthalmia neonatorum. Andrews found this germ in all of 122 cases he examined. More than one form of bacteria has been described as the essential pathogenic organism connected with trachoma. But investigations of this sort have thus far not excited much interest among ophthalmic specialists, and have lead to no radical change in the methods of treatment. Probably, however, few, if any, doubt the existence of such specific organisms, or that their implantation is a necessary factor in the production of these diseases. And this faith in the essentially contagious nature of these affections has led to an active effort to prevent blindness from them by stamping out epidemics through the isolation of cases, and by more efficient disinfectant treatment.

For preventing the spread of trachoma isolation is entirely practicable, since for this purpose isolation means little more than such cleanliness and care of the toilet as well-to-do cleanly people always practise for their personal comfort.

Trachoma is almost confined to the comparatively poor and degraded, and among them it seems to spread seriously only when especially favored by the crowding together of particularly susceptible and infected subjects. In Philadelphia the great majority of cases are directly traceable to infection during a steerage passage from some European country, or to crowded orphan schools or asylums, and a few cases arise in the overcrowded tenements of the lowest class. It is probable that the small number of cases of this disease presented in this city is due to the small amount of overcrowding—the small number of persons per house as compared with other large cities.

The important practical measures to be adopted then, are those directed to preventing the importation of cases infected in foreign countries or during the passage hither, and the prompt recognition, isolation and effective treatment of cases gaining admission to orphan schools and asylums. The first requirement is one of many that demand a better sanitary supervision of immigrants. The second is the proper attention on the part of managers of schools and asylums, which ought to be easily obtained, but by popular ignorance and indifference is often rendered difficult.

It needs to be reiterated and insisted upon that while the proper intelligent care of orphans is a most praise-worthy charity, the gathering them together to serve as a hot-bed from which to disseminate suffering and blindness is something quite different. It is to be hoped that the committee of the Medical Society of the State of Pennsylvania to look after this matter will be able to make some impression on the institutions of the State.

The opportunities for the transmission of trachoma are greatly increased by its extremely chronic course, and if, as is claimed, some of the methods recently introduced are capable of cutting it short, their application is of great importance in preventing the further spread of the disease.

The prevention of blindness from ophthalmia neonatorum is quite as much a question of treatment as of the prophylaxis. The principles and methods concerned are well-established, and have been clearly set forth in a paper by Dr. Schneideman in a recent number of the Re-

PORTER. The great obstacle to their efficient application is the failure to recognize the nature and gravity of the affection, on the part of those having the care of infants. Looking in this direction it is suggested that mid-wives be compelled, under liability of heavy fine for neglect, to promptly report every case of ocular inflammation to some health officer or responsible practitioner. It is probable that the adoption of such a law would at least bring the subject forcibly to the attention of many nurses and practitioners who at present do not recognize its importance. Even to agitate for its passage must have an excellent effect.

BOOK REVIEWS.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS. Vol. IV. For 1891. Philadelphia: Wm. J. Dornan.

This volume of the Transactions of the American Association of Obstetricians and Gynæcologists contains some very instructive matter from prominent men in these specialties. The last meeting of this society was held in the Academy of Medicine in New York City, and was attended by 43 of the 83 members composing the body. Among the many good papers contained in the volume, we specially note the following: "A Clinical Note on Intrauterine Irrigation After Labor," by Lewis S. McMurtry, of Louisville. The subject is treated in a plain, practical and eminently surgical manner, and no one can fail to receive some valuable information regarding the indications for uterine irrigation, and the method of performing it, which is of first importance. Another valuable paper is by Dr. J. F. W. Ross, entitled "How Should we Proceed when Abdominal Tumors are Complicated by Pregnancy." An admirable article on "Femoral and Ventral Hernia in Women," was contributed by Dr. Henry O. Marcy.

The transactions are printed in book form and upon excellent paper. The wood cuts are all good and well illustrate important features in many of the papers. Everyone interested in the progress of obstetrics and gynæcology should read these contributions.

TRANSACTIONS OF THE AMERICAN OTOLOGICAL SOCIETY. Published by the Society.

These transactions consist of the papers read at the Twenty-fourth Annual Meeting of the Society, which was held at the Arlington House, Washington, D. C., Sept. 22d, 1891, in connection with the Second Annual Congress of American Physicians and Surgeons.

While these transactions are chiefly of value to the aurist, still the general practitioner will find much useful matter in connection with his general practice. The volume contains, besides the proceedings, fourteen papers of excellent merit, embracing the latest knowledge concerning the science of otology. Some of the papers are exceedingly interesting, especially several dealing with the operative treatment of mastoid disease. The Society is to be congratulated on the good work it is doing.

CORRESPONDENCE.

BONE IN THE THROAT.

EDITOR OF THE MEDICAL AND SURGICAL REPORTER:

Seeing a report of cases of bones in the the throat in the REPORTER recently brings to my mind a case that came to me several years ago. A lady about fifty years of age was eating of baked chicken, and accidentally swallowed a bone, which lodged in the esophagus several inches below the pharynx. She immediately sent for a physician, who thought that in time it would work down; if not, it would require an operation. The patient became somewhat alarmed at her situation and sent for another physician, who likewise feared that an operation would have to be performed. He called me in consultation.

When I arrived, I found the patient eating Indian pudding and milk, some four hours after swallowing the bone, which she felt distinctly where it had first lodged. The family had devised this plan of swallowing something to take the bone down, but were taking only small quantities of milk and pudding, finely mashed, at a time. Liquids were also tried, but none of them were of any avail. I told her that the pudding and milk was the best plan they could have devised; but, instead of taking small quantities at a time,

she should take as large a spoonful of pudding as she could swallow without chewing it up, and that would distend the esophagus and take the bone along with it. I advised her to try it at once.

The attending physician then took me into an adjoining room to consult over the case. We were scarcely seated before her husband came into the room and stated that the bone had gone down. Only two mouthfuls were sufficient to dislodge the offending bone. JOHN M. CURRIER.
Newport, Vt., April 27, 1892.

LITERARY NOTES.

LITTLE THINGS.

It is curious to note that many things which have turned out most useful discoveries for man, having a great influence upon the lives and destinies of mankind, owe their beginnings to some slight accident.

It is said that the art of printing took its origin from some rude impressions taken (for the amusement of children) from letters carved on the bark of a beech-tree.

Gunpowder was discovered from the falling of a spark on some materials mixed in a mortar.

The stupendous results of the steam-engine may be traced to the boy who sat watching the steam which came from the nose of the tea-kettle.

Electricity was discovered by a person observing that a piece of rubbed glass attracted small bits of paper.

Pendulum clocks were invented after Galileo stood observing the lamp in a church swinging to and fro.

The telescope we owe to some children of a spectacle-maker placing two or more pairs of spectacles before each, other and looking through them at the distant sky. Their idea was followed up by older heads.

Sir Isaac Newton was sitting in his garden one day when he saw an apple fall from a tree. This common occurrence set him to thinking why things should fall down and not up, and this train of thought led him to the discovery of the law of gravitation.

Every one can now appreciate the importance of the slight matters spoken of, because the wonderful results are now before the world. But the beginnings of these things were treated with ridicule and scorn. No matter how unimportant a circumstance appears, it is quite possible that great results may come from it. In a small building which was once Peter the Great's workshop in Holland is the inscription: "Nothing is too little for the attention of a great man."—*Harper's Young People.*

BABYHOOD, the mother's nursery guide, continues in its May issue the medical articles on catarrhal affections and their complications in children, and the treatment of the headaches of childhood. A good deal of space is devoted to the question of "What We Would Do With Him," the case being that of a particularly wayward and unmanageable child, whom a number of mothers would treat each in her own way. Under "Nursery Problems," advice is given as to the suitable time for weaning, the disagreeing of milk, learning to sit upright, constipation, taking cold easily, club feet, suspicion of worms, etc. There are also articles on "Dressing the Baby After Six Months," "Occupations and Amusements," "Primary Musical Education," etc.

THE MEDICAL DEPARTMENT OF THE GERMAN ARMY.

IN accordance with the principle that the maintenance of the efficiency of the army is the prime condition of final success, and that the care for the troops is one of the most important duties of the commander and the administration, the greatest attention has been paid in the German army to sanitary matters. The system is divided into the medical *personnel* and the sanitary institutions. The former comprises all sanitary officers, including the apothecaries, who rank with administrative officials, the non-commissioned surgeons and apothecaries, the hospital stewards, the nurses, and, in war, the men carrying away the wounded. The sanitary institutions comprise, in peace, the garrison hospitals and regimental wards for sick soldiers; in war, the sanitary detachments, the field hospitals, the war *etappen* and reserve hospitals, and the sanitary trains upon the railroads.

The highest authority in peace is the Medical Department of the Prussian War Ministry; in war, the chief of the sanitary service, who is attached to the head-quarters

of the army. Under the direction of the Surgeon-General of the army, a surgeon-general supervises the sanitary service of each army corps. In Bavaria and Saxony a sanitary department or a sanitary director takes the place of the Surgeon-General. In each division the surgeon oldest in rank has general charge of the sanitary affairs, while the practical work devolves upon the staff and assistant surgeons attached to every body of troops, who are in turn assisted by non-commissioned surgeons. All surgeons have the rank of officers, and occupy positions of absolute equality with the latter.

It may be mentioned here as a matter of interest that the death rate of the German army in peace is smaller than that of any other standing army. The same applies to the number of sick and disabled persons.

In war every sick or wounded soldier, as well as any person charged with the care for the same, is protected by the stipulations of the Geneva Convention. All those connected with the sanitary service carry, therefore, the well-known badge, the red cross on white ground, which is also painted on every wagon belonging to the service, while a flag showing the same emblem floats over every hospital. Red flags, or red lanterns during the night, make known at large distances the places where the wounded are collected and where the field hospitals are established.

Every soldier carries a small package of bandages, and around his neck a badge with his name, for purposes of identification. Every hospital steward carries a satchel with bandages and a bottle with restoratives, every surgeon a case of instruments. Every battalion of infantry or regiment of cavalry is followed by a medicine-wagon, filled with medicine and bandages, stretchers, and everything else necessary for the care of the wounded or sick soldiers during march or battle.

The voluntary medical service has become a valuable adjunct to the military sanitary service since it has been regulated by proper rules. It is under the direction of a commissioner appointed by the Emperor, and many excellent young men entered its ranks during the late war who were incapacitated from some cause for other service. Many eminent physicians devoted themselves likewise to care for the sufferers by accepting positions as consulting surgeons-general.—From "The German Army of To-Day," by Lieutenant-Colonel Exner, in *Harper's Magazine* for May.

PERISCOPE.

THERAPEUTICS.

ICHTHYOL.

Among cutaneous diseases, Dr. Charles (*The Lancet*, Sept., '91) found ichthyol, in an ointment of two to ten per cent., especially valuable in burns of the first and second degrees and in scalds. Externally and internally, it was very efficacious in erythemata of unspecified nature. Several rapid cures of chillblains were obtained by washing with hot water and ichthyol soap, and subsequent application of ichthyol and turpentine, equal parts; of ichthyol and glycerine, equal parts; or of ichthyol, three parts, glycerin, water and dextrin, all ten parts. In intertrigo it was also useful, as well as in zoster and in eczema, in acne and acne rosacea, in sycosis and in psoriasis. He also found the ichthyol treatment very efficacious in boils, carbuncles and erysipelas.

MEDICATED SOAPS.

A. Santi, of Bern (*Correspondenzbl. für Schweizer Aerzte*, No. 13, xxi. Jahrg. 1891), speaks in praise of medicated soaps, which, within the last few years, since they have been manufactured (especially abroad) to suit the requirements of the physician, have come into good repute. Soaps easily penetrate the epidermis: hence drugs are more active in this form than in ointments. The method is cleanly, cheap, and more agreeable to the patient than that of ointments. The soaps manufactured according to the formula of Unna are first considered. The soap-mass, in the first place, reacts absolutely neutral, and is composed of the best beef tallow and freshly prepared soda and potash lye, two or three (in summer) parts soda to one of potash, which latter acts more effectively than soda on the horny layer of the epidermis. To obviate the drying effect of even neutral soap on the skin, the soaps are all superfatted with about four per cent. free fat, for which purpose olive oil is used. The following soaps in cake form

are mentioned. They contain marble, ichthyol, salicylic acid, zinc oxide and salicylic acid, tannin, tannate of soda, oxide of zinc and tannate of soda, zinc tannate, rhubarb, tar, sulphur, tar-sulphur, camphor, camphor-sulphur, iodide of potassium, soda and naphthol-sulphur.

A superfatted potash soft soap has also been made by Unna and Micek.

THE TREATMENT OF ACUTE MUSCULAR TORTICOLLIS.

This disease has been recognized for many years, but has not received very extensive notice at the hands of systematic writers upon the diseases of children. Acute torticollis generally appears suddenly, perhaps after rapid motion of the affected parts, or it may appear spontaneously. The pain may be intense, even after the slightest exertion, and this is the most prominent symptom. It is located in the cervical region, but may include the entire area of the trapezius muscles. With the pain there is also muscular contraction causing more or less distortion of the head and neck. The top of the trapezius muscle is the initial location of the contraction in the majority of cases. In the spasmodic form of the disease there is clonic contraction of the muscles. In addition to the symptoms mentioned, there may be malaise, loss of appetite, slight fever, and insomnia. The contracture diminishes after a few days, the pain becomes less severe, and the head resumes its normal position. The disease is especially common in childhood and adolescence, it is rare in adults and old age. It is more common in boys than in girls. It is related to rheumatism, and is sometimes called *torticollis a frigore*. Syphilis associated with rheumatism is also an occasional cause. Cervical arthritis may result in an osseus torticollis which sometimes resembles acute muscular torticollis. Rheumatic or scarlatinal arthritis may also simulate it. Acute muscular torticollis may also resemble lumbago, the latter being sometimes exclusively of a muscular character and the cause of rheumatism, or muscular rupture. With reference to contractures, two varieties of torticollis may be mentioned: (1) that form which is caused by muscular effort, true traumatic torticollis, in which the contracture is caused by the slight twisting of the cervical articulations, perhaps by the rupture of muscular fibres. (2) the spontaneous form which results from mild arthritis in the cervical region, or from idiopathic muscular rheumatism involving the muscles of the neck. The acute form of torticollis resembles the chronic one, but in the former the symptoms improve and disappear, in the latter they persist and become aggravated. The acute form is usually recovered from, even though it may be untreated, but it may pass into the chronic form if neglected. Rest, warm applications, and anodynes subcutaneously will relieve the pain in most cases, but an exclusively medical treatment is not very efficacious nor practical. Other useful means of treatment are massage, suspension in Sayre's extension apparatus, and electricity.—Chocas, *Rev. Mens. Mal. Enf.* Oct. 1891.

BENZINE IN TRICHINOSIS.

In a case where a large number of persons had partaken of pork which was discovered a few hours later to have been plentifully supplied with this detested infection, a physician administered 40 minims of benzine in capsules and followed it by a cathartic. Not one of those thus treated was afterward known to have suffered from trichinosis.

THE TREATMENT OF IMPOTENCE IN MEN.

Dr. Victor V. Gyurkovecky, in the *Wiener medicinische Presse*, 1891, presents two papers (No. 46, S. 1738; No. 47, S. 1780). He reports complete cure by suspension in Sayre's apparatus in three cases of sexual neurasthenia. In cases where this condition is the result of gonorrhœa, he anoints his catheter or endoscope with balsam of copaiba to get its effect upon the mucous membranes, makes a thorough examination and cures the local condition. He has treated with benefit one case, and to no effect one case of masturbation (a most frequent cause of impotence), by hypnotic suggestion. In sexual neurasthenia he has treated two cases by hypnotic suggestion, one to a cure and the other with benefit, although he is yet under treatment. From these cases he concludes that hypnotic suggestion is a powerful remedy for masturbation, pathological pollutions, and the various forms of impotence.

THE TREATMENT OF CYSTITIS WITH MERCURIC CHLORIDE.

Guyon (*Annal. des Mal. Génito-urinaires*, xi.) recommends mercuric chloride in the treatment of cystitis. The results are especially good if the cystitis be tuberculous. Irrigation or instillation may be employed. The mercurial solution may vary from 1:5000 to 1:1000. At first, from twenty to thirty drops are instilled, by means of a syringe, into the prostatic urethra, the quantity being gradually increased to a dram. The bladder must be evacuated after each instillation. In gonorrhœal cystitis, good results were obtained from instillations of silver nitrate, 1 or 5: 100.—*Münchener med. Wochenschr.*, 1892, No. 5, p. 81.

TREATMENT OF GRIP.

Dr. Roland G. Curtin, in the *Therapeutic Gazette*, writes: For the first time since 1889, a recurrence to old therapeutic measures has been of service. The fever mixtures of antiquity seem at least to allay fever, induce quiet and sleep, produce perspiration, and hasten recovery. The standard saline and other fever mixtures seemed to be again efficacious.

For the initial symptoms, salicin still seems to be the best and safest remedy, both as a tonic and an antipyretic, in doses of from 10 to 30 grains. Each dose will often be followed by marked relief, and the occurrence of perspiration, with a fall in temperature. No remedy seems to show the same direct results, unless it be antipyrin or phenacetin, which are decidedly more unsafe, though not so unsafe as in the preceding years, since the tendency to dangerous heart failure seems now much more rare. Salicin may be combined with small doses of phenacetin, antipyrin or sodium salicylate.

The formula most agreeable is,—

℞ Salicin, ʒiii;
Sodii salicyl., ʒss; vel Phenacetin, gr. xvi;
Syrup. acaciæ, fʒvii;
Aquæ, fʒix;
Olei gaultheriæ, gtt. xv.
Sig.—Teaspoonful every hour or two. M.

For the delirium and insomnia, sulphonal is the best and most efficacious soporific.

Ammonium iodide, in 2-grain doses every hour, until iodism is produced, hastens recovery in the later stages of pulmonary catarrh and asthma.

Ammonium chloride has proved more useful this year than heretofore.

Nausea is best controlled by cocaine, in doses of $\frac{1}{12}$ grain every two hours in solution. In severe cases feeding by the stomach must be withdrawn and rectal feeding employed, champagne and plain soda-water from the siphon being given to quiet the stomach and allay thirst.

Catarrhal jaundice has been frequently observed, generally in children, and treated by small doses of calomel and sodium phosphate, with speedy recovery.

In any case with *bilious* vomiting, 2 grains of bicarbonate of sodium and $\frac{1}{8}$ grain of calomel may be employed until some action of the bowels has been produced.

A SPECIFIC FOR TETANUS DISCOVERED.

Dr. R. Schwartz, of Padua, announces the successful treatment of tetanus by means of injections of the tetanus antitoxin of Tizzoni and Caltani. These experimenters succeeded in producing immunity against tetanus even in animals susceptible in a high degree, and have shown that the blood-serum exerts an antitoxic action, and is capable of producing immunity against and cure of the disease. They succeeded in obtaining this tetanus antitoxin in a solid state by the addition of alcohol to the serum, and by drying the precipitate *in vacuo*. As the disease in man is of a longer duration and less certainly fatal than in many animals, there seemed to be good reason to hope that the tetanus antitoxin might be of great value. Gagliardi, of Molinella, treated a severe case by hypodermic injection of one gramme. All symptoms of tetanus disappeared and complete recovery ensued. Schwartz relates at length the case of a peasant boy, aged fifteen, treated by him.

ANTIPYRIN IN HEPATIC COLIC.

Dr. Kraus (*La Semaine médicale*, No. 61, 1891) recommends antipyrine in hepatic colic. Given in the beginning, it calms the pain, and even may abort the attack; if administered later, it exerts an injurious influence, and may aggravate the patient's condition. Here morphine replaces it, and, when an attack has lasted two or three hours, an injection of morphine, instead, should be immediately given.

EARACHE.

Take five parts of camporated chloral, thirty parts of glycerine, and ten parts of oil of sweet almonds. A piece of cotton is saturated and introduced well into the ear, and it is also rubbed behind the ear. The pain is relieved as if by magic, and if there is inflammation it often subsides quickly. —*Medical Brief.*

ACUTE IODISM AND ITS DANGERS IN SYPHILIS.

E. Finger discusses this subject in *Gazette Lekarska* (No. 24, 1891). The headache may reach an alarming intensity, symptoms of cerebral compression, vomiting, vertigo, delirium, staggering gait, somnolence and coma may supervene. One case showed alarming depression of the heart's action. Neuralgias of the cerebral nerves often occur. These symptoms are probably due to an increased cerebral circulation in vessels which have undergone specific alterations. Consequently caution is necessary in the administration of iodides in patients showing cerebral symptoms. The best method of obviating unpleasant effects is to give the iodide in milk; Belladonna may be added, as well as potassium bromide.

BROMAMIDE, A NEW ANTIPYRETIC AND ANTINEURALGIC REMEDY.

Dr. Augustus Caillé, writes in the *N. Y. Medical Journal:* This drug is described by its discoverers, Messrs. F. H. Fischedick and Charles E. Koechling, of New York city, as a new bromine compound of the anilide group containing seventy-five per cent. of bromine ($C_6H_2Br_3NH.HBr$).

It is in the form of colorless, needle-shaped crystals nearly odorless and tasteless, insoluble in hot or cold water, slightly soluble in cold alcohol, and soluble in sixteen parts of boiling alcohol. Chloroform, ether, and the fixed oils dissolve it, but it is insoluble in benzine. Its action toward litmus paper is neutral. It is a very stable compound, not being affected by any of the ordinary reagents. It melts at 243° F., and volatilizes at 310° F. Without change, subliming in beautiful feathery crystals.

Bromamide was first given to dogs and rabbits, in doses of 2 grammes (30 grains), without noticeable deleterious influence and without affecting the composition of the blood in these animals. The administration of from 0.6 to 1 gramme (10 to 15 grains) to healthy adults was followed by a slowing of the pulse *without sweating.* The administration of 0.06 to 0.2 gramme (1 to 3 grains) to children from one to three years of age was accomplished without untoward symptoms.

The experiments as to the therapeutic properties of bromamide were carried on at the German Hospital from June 1 to November 1, 1891, and suffered embarrassing interruption in the beginning of the experimental term, in consequence of the resignation of the entire house staff. Bromamide was administered in the following class of cases: Typhoid fever, acute articular rheumatism, chronic rheumatic arthritis, chronic nephritis, acute fibrinous pneumonia, rheumatic fever with acute endocarditis, general and localized dropsy due to hepatic, renal, or cardiac disease, and diverse forms of neuralgia; and special attention was given to a possible antipyretic, diuretic, diaphoretic, antineuralgic, and sedative action of the drug.

Bromamide was administered symptomatically in a number of cases of neuralgia from various causes.

1. Compression myelitis, with intercostal neuralgia. No beneficial effect from 10 to 20 grains of bromamide.

2. Premenstrual headache, 15 grains of bromamide; marked relief in two hours.

3. Reflex hemicrania from carious tooth; 15 grains of bromamide; relief in three hours.

It will be seen from a perusal of the foregoing that the trials thus far made are encouraging, and may warrant further experiments, especially in other forms of disease.

Bromamide has the power of reducing the temperature in most cases of febrile disease from 1° to 2.5° F., without the excessive sweating as produced by other antipyretic drugs. It has, according to the above-recorded experiments, no pronounced diuretic action, and it is, so far as could be ascertained, free from unpleasant symptoms as regards the digestive tract. The lancinating abdominal pains noticed in several of the severe forms of disease can not fairly be attributed to the use of

bromamide, because such phenomena were never observed when the drug was administered to healthy subjects.

Bromamide can safely be given in 10-to 15-grain doses several times a day, as an antipyretic and anti-neuralgic to adults, and in doses of from 1 to 5 grains to children. It may be given in capsule, in water, or dry upon the tongue, or suspended in a fluid.

In conclusion, I take pleasure in expressing my indebtedness to Dr. Kurth, Dr. Inglis, and Dr. Moscovich, of the house staff, for valuable assistance in securing these notes.

MEDICINE.

A NEW METHOD OF MEASURING THE CAPACITY OF THE STOMACH.

At the recent Italian Medical Congress, Forlanini (*Rif. Med.*, October 24, 1891) proposed a new method of ascertaining the presence of dilatation of the stomach. He passes an œsophageal sound into the stomach, and by its means distends the organ with air, in no case using a pressure of more than seven or eight centimeters of water; the air is then withdrawn by means of an aspirator and its volume ascertained. By always using the same amount of pressure when injecting, the effects of any treatment on dilatation of the stomach can be readily ascertained.—*Brit. Med Jour.*

THE ANTISEPTIC FUNCTIONS OF THE LIVER.

Dujardin-Beaumetz (*Gazette Hebdomadaire de Medicine et de Chirurgie*, Aug. 15, 1891), writing concerning the antiseptic functions of the liver, says that while, at the present day, it is proved beyond doubt that the liver possesses antiseptic powers, there are no signs which show definitely when this function is being properly fulfilled. The problem has been approached in various ways. Hayem and Tissier claim that the presence of urobilin in the urine is a sign of a morbid condition of the hepatic cells. The presence of urobilin is easily detected by the spectroscope. It is certain that its presence indicates some derangement of the liver-cells, but such derangement often exists without any urobilin in the urine. Roger claimed that a correlation exists between the glycogenic and antiseptic functions of the liver, and it is only necessary to determine the condition of the former to judge of the latter. But this is not to be relied on. A third method of determining the condition of the antiseptic function of the liver is by determining the toxicity of the urine. But this is not reliable, as jaundice is frequently present, and bile is much more toxic than the urine. To maintain the integrity of the antiseptic function, we must attempt to increase the glycogenic power and to shut off the supply of poison. The first object is attained by a nourishing diet and by keeping down the temperature; the second by intestinal antisepsis, favoring elimination and diminishing cellular activity.

The best antiseptics are salol and bismuth salicylate. Purgatives are of use only when there is constipation. Favor diuresis by copious draughts and by mild alkalines, and keep the skin active by baths and friction. Forbid meat and hard work, either bodily or mental.—*Univ. Med. Mag.*

PATHOLOGY OF THE NERVE PLEXUSES OF THE INTESTINES.

Bouome (*Archivio delle Scienze Mediche*) after an extended series of researches, comes to the following conclusions:

1. Extirpation of the cœliac ganglion, with partial destruction of the solar plexus, produces constantly in rabbits atrophy of intra-intestinal nervous plexus, accompanied with profound atrophy of the liver and spleen and general marasmus.

2. Atrophy of the intestinal plexus and general marasmus are more pronounced when there develop neuromata and fibroneuromata after the extirpation of the cœliac plexus.

3. There exists no relation between the nutritive activity of the intestinal plexuses and the muscular tone of the intestines.

4. Obstructing the circulation in the intestines produces throughout the entire length of the intestine where such obstruction exists, a true necrobiosis of the plexuses of Meissner and Auerbach.

5. In cases of a chronic saturnism, the author observed complete degeneration of the plexuses of the intestine, accompanied with an advanced sclerosis of the semilunar ganglion and of the entire solar plexus.

6. In individuals with chronic catarrh of the intestines, the author observed simple and pigmented atrophy of the plexuses of Meissner and Auerbach.

DIAGNOSIS OF LESIONS OF THE OPTIC LOBES.

Eisenlohr reports the case of a young man, twenty-eight years of age, who was struck in the head with a bullet from a revolver, the ball being found in the tubercula quadrigemina at the necropsy, who developed the following symptoms:

1. Tremor of the left arm, with unequal pupils, following secondary irritation of the pyramidal tract.

2. Associated paralysis of the eye-muscles, with diminution of the acuteness of vision, this latter symptom being due to a lesion of the optic lobes, the ophthalmoplegia depending upon a concomitant lesion of the nucleus of the occulo-motorius.

3. Polyuria without glycosuria, cerebellar ataxy, and finally symptoms of cerebral compression. The writer emphasizes the existence of visual and pupillary disturbances in lesions of the optic lobes.—*Rivista clinica e Terapeutica, 15, 1891.*

RECURRING OCULAR PARALYSIS.

In the *Riforma Med.* quoted in a recent *Centralbl für Klin. Med.*, Massalongo directs attention to the condition of so-called ophthalmoplegic migraine. This was at first regarded as a periodic or recurring weakness of the third nerve, depending upon an affection of the nuclei until Charcot first gave it the name which we have used above. The author found at a necropsy on a patient suffering in this way that the symptoms depended on an inflammatory process or a new growth in the pia at the base of the brain, which affected the nerves which were pressed upon, and so increased the vaso-motor effects to which the varying conditions by exposure to cold, excitement, depression, menstruation, or dyspepsia gave rise. Such an explanation of the phenomena in one case suggests the possible presence of a demonstrable lesion in others to account for symptoms which, although associated with headache, have probably no necessary connection with migraine.

SURGERY.

THE TREATMENT OF REDUCIBLE HERNIÆ BY THE INJECTION OF ALCOHOL.

Edward Steffen of Zurich, during the past three years, has treated 326 cases of reducible herniæ by Schwalbe's method, and has published the results in the *Correspondenzblatt für Schweizer Aerzte.* In most instances the patients were able to continue their work during treatment. After the injection the puncture was cleaned and covered with mercurial collodion. Notwithstanding, in a few cases, sloughing took place; but this acted rather beneficially than otherwise. The number of injections in a single case varied 6 to 168, the latter extending over a period of two years and a half. A medium-sized rupture in an adult required from 80 to 100 grammes of alcohol. The author used alcohol 70 per cent. in doses of one to four grammes, substituting in exceptional cases extract of oak bark. Latterly he found the addition of phosphoric acid, in the proportion of 1 to 200, advantageous. In thirteen cases the result of the treatment is not known, in twenty-nine a cure was not possible from various causes, such as obesity or size of the rupture; of the remainder, 245 cases are reported cured and 19 improved. The longest time taken to effect a cure was four years, the shortest one year. Of 257 inguinal herniæ, 216 cases were cured and 16 improved, with 23 relapses. Of 13 femoral herniæ, 9 were cured and 2 improved, with one relapse. Of 19 umbilical herniæ, 17 were cured, with no relapse. Of 4 herniæ in the linea alba, 3 were cured, the other improved. It appears that the more recent the herniæ and the younger the patient the more favorable the prognosis, and the ambulant treatment, with intervals of three to seven days between the injections, gave better and more lasting results than the treatment in bed with daily injections.—*Lancet.*

INDICATIONS FOR COLOTOMY.

Dr. Kelsey, (*Therap. Gazette*, Jan. 1892) gives the following indications for the performance of colotomy:

1. In all cases of cancer which cannot be completely extirpated, where the disease is liable to produce any degree of ob-

struction, or is broken down and discharging into the rectum. It is possible to have cancer near the rectum which will cause no symptoms referable to the rectum, and hence furnish no indications for operation.

2. In all cases of incurable non-malignant ulceration where the disease is too extensive to admit of complete resection of the ulcer.

3. In all cases of threatened obstruction where the obstruction cannot be permanently overcome by attacking it directly; for example, the obstruction due to old pelvic cellulitis in women.

4. In all cases of recto-vesical fistula.

5. In cases of congenitial malformation where the rectal *cul-de-sac* cannot be dissected out and brought down to the surface.

THE VARIOUS SURGICAL PROCEDURES DEVISED FOR THE RELIEF OR CURE OF TRIGEMINAL NEURALGIA (TIC DOULOUREUX).

Victor Horsley says neuralgia is a term of somewhat vague import, merely implying the existence of pain as a result of some morbid condition of the nerves. The nerve affected in this case is the fifth, or trigeminal. Pain may be situated in any part of its region of distribution, and may depend upon an affection of any branch of one of its three main divisions; pain is peculiar in several respects. It is intense and paroxysmal with frequent intervals of freedom which may extend over days or hours, or may be limited to only a few seconds. It is often confined to a particular branch of one of the divisions, and may extend to all three divisions of the nerve. The tender spots, or foci, were first pointed out by Valleix and are as follows: The supraorbital notch, the junction of the nasal bone and cartilage where the nasal nerve emerges, and the inner angle of the orbit where the trochlear branch becomes superficial. Other points, which are less frequently the seats of pain, are the upper eyelid and the eyeball itself. In the second division the most common foci are the infraorbital foramen and the malar foramen in the malar bone. In the third division the inferior dental nerve and the lingual are the most common seats of severe pain, sometimes experienced in the auriculotemporal region just in front of the ear, and rarely in the lower lip. The author recommends the treatment by drugs being thoroughly tried. Probably the best results are got from quinine, especially in combination with arsenic, and from gelsemium; antipyrin is also useful in some of the slighter cases. Opium can only be regarded as a palliative. Chloride of ammonium is sometimes efficacious, and aconitin is recommended by Dr. Seguin. Counter-irritation in the form of blisters over the point of emergence of the nerve, or along its course, are also useful, and not infrequently give great relief. Chloride of methyl may be mentioned, but its efficacy, he thinks, in this condition would be slight. Galvanism is good in some cases. The operative procedures are of four different kinds, namely, nerve-stretching, nerve-division, or neurotomy, the excision of part of the nerve, or neurectomy, and nerve-avulsion. Another way in which a part of the nerve is occasionally destroyed, is by thrusting into the foramen of exit a red-hot wire, but there is reason to suppose that it will never come into general use. He proceeds to consider in detail the different branches of the fifth nerve; to describe the operations themselves, and the various modifications which they have from time to time undergone, and the results which may be hoped for from them. —*British Med. Jour.*, Nov. 28, 1891.

OBSTETRICS.

INTRA-UTERINE TRANSMISSION TO THE FŒTUS OF PATHOGENIC BACTERIA.

Lubarsch's (*Rev. Mens. des Mal. de l'Enf.*, September, 1891) investigations were made upon rabbits, guinea pigs, and rats, thirty-nine in all, with 106 fœtuses. Sub-cutaneous, intra-venous, and intra-peritoneal methods of inoculation were practiced with cultures of anthrax, the pneumo-coccus of Fränkel, and the *bacillus enteritis* of Gärtner. The following results were observed: Of seven rabbits, which were allowed to die from anthrax, transmission to the fœtus was observed in two cases by means of the microscope and cultures, in one case by means of the microscope alone, and in one case by cultures alone. Of twenty-one guinea pigs, positive results were demonstrated in six cases with

the microscope and cultures, in two by cultures alone, and in two by the microscope alone.

Of three rabbits, which were inoculated with the pneumo-coccus, positive results were determined in two with the microscope and cultures. One guinea pig was inoculated with the *bacillus enteritis*, the result being negative. How can we explain the inconsistent transmission of the micro-organism to the fœtus?

The author does not concede that pathological modifications of the placenta, from hæmorrhage, etc., play the preponderating rôle, which has been attributed to them by Wolff, Malvoz, Virchow and Birco-Hirschfield.

He believes, rather, as the result of his experiments, that the bacilli can traverse intact epithelium, and that this does occur in the transmission of the bacilli to the fœtus. If this transmission does not occur very frequently, it is due to the fact that the micro-organisms, and especially the bacteria of anthrax vegetate for only a very short time in the placenta, and that proliferation in the animal organism varies with the species, and is often very limited.

PARTIAL STARVATION OF THE FŒTUS IN CASES OF CONTRACTED PELVIS.

In discussing premature labor (*Amer. Jour. Obstr.*, March. 1892), Dr. Bettman says: This paper would not be complete without reference to an entirely new solution to the question of moderately contracted pelvis proposed by L. Prochownick, of Hamburg, in August, 1889. Prochownick tried the novel experiment of stunting the growth of the fœtus in utero by starving the mother, or, rather, by placing the mother on the ordinary diet for diabetics. His first patient had been delivered of four children; two prematurely, one by version, one by perforation; and all the infants had perished. Toward the close of the fifth pregnancy the patient was placed on the strict diet, and was delivered at term of a healthy infant weighing five pounds, three ounces, with adipose layer practically wanting, and with very movable skull bones. The infant developed rapidly and normally. Encouraged by his success, he repeated the experiment in two similar cases, and both the infants were born thin, had movable skull bones, and thrived perfectly. Thus three mothers who had born eight dead children were enabled by these means to rear living offspring. Prochownickh as found imitators, and in March, 1890, A. v. Brehm reported a fourth successful case in the St. Petersburg *Medicinische Wochenschrift.*

The departure of Prochownick is so novel, is based on such rational physiology and has been so signally successful that it merits not only the general attention of the obstetric world, but also general imitation in appropriate cases.

GYNECOLOGY.

CONGLUTINATIO LABIORUM.

Sanger (*Centralbl. f. Gynäk.*, in December 12th, 1891) read, before a recent meeting of the Leipzig Obstetrical Society, a paper on two distinct forms of adherent labia. The first variety was seen in a robust little girl, aged 3. The external labia were normal, the nymphæ seemed completely hidden. A thin membrane of the mucous type united the labia majora, looking at first sight like a hymen. It could be pushed downwards by the finger introduced into the rectum. It reached forwards to the clitoris, close behind which organ and a little to the left of the middle line lay a very minute orifice in the abnormal membrane, through which the urine could pass in a full stream. On passing a probe into this orifice and backwards, it could be plainly felt through the membrane, and on gentle pressure the membrane was torn through, with but slight hæmorrhage. The normal vestibule then came into view. The membrane proved to be simply the labia minora united together. The case was an example of Bókai's "epithelial union" of the labia, of which that observer described thirty-nine cases. It was clear that minute vessels ran in the uniting tissue. The second case was in a woman, aged 21, who consulted Sänger concerning an impediment to connection and irregular painful menstruation, with free show. The vestibule easily allowed the passage of the finger, but the introitus was reduced to a slit three-fifths of an inch long, immediately in front of the perineum. From this slit forwards to the mons veneris extended a broad and very conspicuous membrane, which stretched across between the labia majora, which it completely cov-

ered as far as the hair on each side. This membrane was over 2 inches long and over 1 inch broad. It was pigmented so as to appear of a brownish tint, and bore scanty hair. There was a little depression on its surface close to the mons. This membrane was marked with a kind of median raphé, paler than the general surface, and a number of thin streaks converged from without and before backwards till they joined the raphé. The finger could be passed under the membrane, which consisted of the labia majora fused together. The patient was narcotised, and a grooved director passed under the membrane, which was then cut through with scissors. There then appeared a longitudinal wound in each greater labium. Each wound was closed by an interrupted silk suture. The labia minora were ill-developed, the clitoris and its prepuce elongated and curiously flattened. The patient also had endometritis and congenital ectropion of the cervix, which was treated by scraping and the thermo-cautery. This patient, as her mother remembered, had been subject when a year old to a free yellow discharge, with great external soreness. It was treated by ablution and the application of potato meal; gradually a skin seemed to grow across the parts and the discharge ceased. The discharge was probably a vulvo-vaginitis, and may explain the true nature of many cases of so-called "congenital" conglutinatio labiorum.—*Brit. Med. Jour.*

GLASS PESSARY WORN TWENTY-FIVE YEARS.

R. A. Murray (*N. Y. Journ. of Gynæc. and Obst.*, January, 1892) recently exhibited before the New York Academy of Medicine a glass ball, hollow within, which a woman, aged 78, had carried in her vagina for about twenty-five years. He had considerable difficulty in removing it.

PEDIATRICS.

STROPHULUS INFANTUM.

Gebert (*Archiv für Kinderheilkunde*, 1891, Bd. xiii., Heft 3), with this title considers urticaria papulosa, or the lichen urticatus of older authors, and is of the opinion that hot baths, frequently repeated, act in producing the eruption. As the patients are often anæmic, iron is found useful, and for the itching small doses of antipyrine at night. The body should be sponged with dilute and cold vinegar at bedtime.

ANTIPYRINE IN CHOREA.

In a paper recently read before the Societé Médicale des Hôpitaux de Paris (*Bull. et Mem.*, Dec. 25, 1890,) Dr. Charles Legroux states the results of the treatment of chorea by antipyrine in sixty cases observed throughout their course. He found that antipyrine had a beneficial effect in two-thirds of the cases, rapidly diminishing the intensity of the disease and shortening its duration; recurrence, however, took place in three-fifths of the cases. In the cases in which the drug failed this was found to be due in some instances to intolerance (vomiting, diarrhœa, etc.,) or to cutaneous eruptions; in a few cases the drug seemed to have no effect on the disease. He found it necessary to give large doses and to reach the maximum dose in a short time. Between the ages of six and fifteen doses as high as three to six grammes (about ℥ iss to ℥ iij) a day were well tolerated for several weeks. Serious symptoms of poisoning were never observed, and in some cases in which an eruption or vomiting was at first noticed, when the use of the drug was resumed after a short interval, these symptoms did not recur. None of the cases treated had any rheumatic symptoms, but none were of a serious character.—*Medical Annals.*

INTUBATION AND TRACHEOTOMY.

In a report of these operations done at the Boston City Hospital, Drs. Prescott and Goldthwaite (*Boston Medical and Surgical Journal*, No. 27, 1891) drew the following conclusions: Three hundred and ninety-two cases of intubation, and 139 cases of tracheotomy have been reported, with a mortality-rate of 79.59 per cent. in the former, and 88.5 per cent. in the latter; 2,815 cases of intubation, and 24,941 cases of tracheotomy have been collected and analyzed, showing comparatively no difference in the mortality-rate of the two operations. The results depend more upon the nature of the epidemic than upon the operation. With intubation the results depend more upon the skill and experience of the operator than with tracheotomy.

Thirty-seven cases were seen at least a year and a half after recovery from intubation, with perfect voice, and with nothing that would indicate any ulceration from pressure of the tube.

THE TREATMENT OF DIPHTHERIA.

To what extent principles of treatment of cases of infective disease may be modified by the acquisition of true knowledge concerning the true nature of such affections is well shown in a paper read recently before the Clinical Society of Paris by M. Barbier, in which he dealt with the subject of diphtheria (*La France Médicale*, Jan. 1, 1892). He pointed out that the researches of Klebs, Loeffler, Roux and Yersin, and others have now conclusively established that the pathogenic agent is a bacillus which is only to be found in the false membranes, and does not penetrate either the blood or tissues. That discovery decides the much disputed question of the "local" or "general" nature of the malady. The "false membrane *is* the disease," and the primary object of all medication must be to detach and remove it wherever it is accessible; for one removes thereby not only the morbific agent, but the toxalbumens which the microbe elaborates, and which are the source of the symptoms. But experiment also teaches that the bacillus does not develop on healthy or non-excoriated mucous membrane, and it is therefore of chief importance that the false membrane should not be detached violently, but gently and slowly. Cotton wool held in forceps gently, and with frequent, patient repetition brushed over the false membrane, will gradually detach it; but care must be taken not to touch any other part. This is the first step. The next is to apply to the affected area such an antiseptic solution as has been proved by experiment to destroy the bacillus. Under M. Grancher, M. Barbier had largely studied this subject experimentally, and found carbolic acid to be the best parasiticide for this purpose; and he now recommends the application of a mixture of sulphovicinic acid (100) and carbolic acid (20) as more efficacious than carbolic acid and glycerine or olive oil, as hitherto adopted. This "*phenol sulphovicine*" causes a transitory sensation of heat and burning, but its taste is not very pronounced, and, he says, children tolerate it well. Moreover, although frequently applied—every hour by day, every two hours by night—M. Barbier has never seen any sign of carbolic poisoning. Before applying it each time there should be practised free irrigation of the naso-pharynx, which aids in detaching more membrane, the warm water being rendered antiseptic by the addition of a small quantity of an alcoholic solution of salol (1 in 40). He claims for this procedure, vigorously carried out, a marked amelioration in the more serious signs of infection—the redness of the throat, glandular swelling, constitutional symptoms and albuminuria. Similar principles he applies to the after-treatment of tracheotomy in laryngeal diphtheria; and he advises the prescription of calomel and naphthol to promote intestinal antisepsis, rendered necessary by the swallowing of portions of membrane detached from the fauces. Then general tonic treatment, with plenty of fresh air and sunlight and avoidance of close rooms and steam. He gives no statistics, but he claims to have seen many good results from adhering thus rigidly to the teachings of the laboratory; and certainly there is no greater field for the study of diphtheria than the Paris Hôpital des Enfants Malades, where M. Barbier's observations have been made.—*Lancet.*

HYGIENE.

THE DIGESTIBILITY OF CHEESE.

It is the general opinion of the laity that the eating of cheese after taking food is an assistance to digestion. This view seems not to be in accord with the result of experiments made by von Klenze, as recorded in the *Allgemeine medicinische Central-Zeitung*, Number XVIII, 1891. He made very thorough tests of the various forms of cheese found in the dietary lists. For the experiments he used an artificial digestive fluid, to which were added fifty cubic centimeters of fresh gastric juice and three cubic centimeters of hydrochloric acid. Into this he placed a gramme of the cheese to be examined. Eighteen varieties were tested, and the following deductions made: Chester and Roquefort cheese took four hours to digest: genuine Emmenthaler, Gorgonzoler and Neufchatel, eight hours; Romadour, nine

hours; and Kottenberger, Brie, Swiss, and the remaining varieties, ten hours. Considering that in a healthy stomach digestion after an ordinary meal is completed in from four to five hours, it would seem from von Klenze's studies, that Chester and Roquefort cheese were the only kinds that were likely to be digested within this length of time, and that the other varieties, some of which are largely in use, not only did not assist digestion, but actually retarded it.—*New York Medical Journal.*

TO PREVENT THE SPREAD OF ENTOZOA.

Dr. Prospero Sonsino advocates the following sanitary measures to prevent the dissemination of entozoa among human beings:

1. If possible the sewers should empty their contents into the sea, but never into a stream. The adoption of a system of irrigation is advisable, if the above is not practicable, provided that the irrigated soil is planted only with such vegetables as are eaten in a cooked state, or better still, with plants which are not edible.

2. If the above-mentioned measures cannot be employed, and the destruction or disinfection of fæcal matter cannot be carried out in general, these precautions should at least be adopted in asylums, schools, and hospitals—the excreta being disinfected by heat, sulphuric acid (10 per cent.) or large quantities of lime.

3. Persons engaged in certain kinds of work—such as in mines, tunneling, rice plantations, etc., should be compelled to defecate at places where the fæcal matter can be disinfected. The fæces of new comers should be microscopically examined for entozoa before they are allowed access to the works, and it would be well to examine them periodically, so as to remove the infected persons at an early period.

4. Veterinary inspection of slaughter houses should be made daily, and all organs and parts of slaughtered animals which are found to contain entozoa.

5. The admission of persons infected with entozoa into hospitals should be made easier than it is now.

6. The pens in which hogs are kept should be inspected.

7. Dogs should be kept away from slaughter houses.—*Centralb, f. d. Medicin. Wissensch.*, No. 2, 1891.

FETID FEET.

The cause of this unpleasant ailment is to be found in the unnatural custom of wearing shoes. Nature contemplated a shoeless animal when she made man, and she so arranged the epithelium on the soles of his feet as to provide for a reproduction of the layers worn off in walking. So well suited to man's necessities was this arrangement, that Parkes, after discussing the merits of various foot-gear, concludes that the best shoe for soldiers is no shoe at all. But man had to improve on nature, and the way he has done it is by encasing the foot in an impermeable casing of tanned leather. This prevents the removal of the epithelium from the sole, and also prevents the escape of perspiration, which, keeping the dead epithelium moist, infallibly renders it odorous.

The reason why washing does not relieve this is, that soap and water alone are insufficient to remove the epithelium. No amount of rubbing will do this, and it is doubtful if anything short of a vigorously wielded scrubbing-brush will do so. But the Greeks had something better even than this. Some of our readers will remember the description given by Xenophon of the games instituted by Cyrus, before his march to the field of Cunaxa, and that among the prizes given to the victors were "golden flesh-scrapers." Not even a brush equals in efficiency the scraping with some metallic instrument, like a dull paper-cutter.

We should recommend, therefore, for fetid feet, that the sufferer should soak the feet in hot water, and scrape them well, every night, until the nuisance is abated; and to keep this up weekly thereafter, with morning ablutions of cold water with no soap, but followed by vigorous rubbing with a coarse towel. This is better than all the salicylated powders or ointment.—*Times and Register.*

IS GERMINATION INDUCED BY MICROBES?

In an article appearing in The Microscope, Dr. Henry Thimer sets forth that in his estimation he has discovered a specific microbe, a micrococcus, which, entering into the seed cells, produces a special ferment which is instrumental in germination. This microbe is provisionally called Micrococcus germinatus. The idea that

microbes are instrumental in promoting the germinative process is not entirely a new one, the author himself quoting Goodale (Physiological Botany) as saying: "It is said that in soil that has been completely sterilized, that is, freed from microbes or germs, seeds provided with all other requisites for germination will fail to sprout. These experiments by Duclaux have not been repeated by other observers." Thimer asks himself, Do these microbes, by working directly on the starch grains, transform them into soluble matter, or do they perform this indirectly by developing the ferments to digest the starch grains?

MEDICAL CHEMISTRY.

MERCURY SALTS AND IODINE COMPOUNDS.

The action of the light on mixtures of salts of mercury and compounds containing iodine have been more fully investigated by George Roe, the results of which he reported to the Chemists' Assistants' Association of London. The author finds that pretty nearly all the mercury salts are decomposed in the light by iodides and iodine compounds, such as iodoform, iodol and soziodol, giving rise to scarlet discoloration, or, in a few instances, to the liberation of iodine. Green, blue or amber glass containers fail to arrest this action, so that such mixtures must be kept in absolute darkness.

IDENTITY REACTION OF PHENACETINE.

W. Autenrieth and O. Hinsberg have recently published a paper on phenacetine and certain of its derivatives in the *Archiv d'Pharmacie*, vol. ccxxix., page 456, in which they first communicate a new identity reaction of the substance, and afterwards give the results of their investigation into the nature of the product of this reaction, and into its constitution. *Identity Reaction for Phenacetin.*—Upon 1 part of finely powdered phenacetin pour 2 parts of nitric acid containing 10 to 12 per cent. of HNO_3 (specific gravity about 1.075), and heat for a short time to boiling. The liquid will assume a yellow to orange color, and the phenacetin, which had at first remained colorless, will at the same time (so far as it is not dissolved) be converted into a nitro compound of an intensely yellow color. When the liquid cools, a further crop of needles of the yellow (or brownish-red) compound crystallizes out. Antifebrin and antipyrine remain unaffected when treated in this manner. If concentrated nitric acid is used, however, antifebrin is colored yellowish-red, and antipyrine yields a red solution. The melting-point of the characteristic yellow derivative of phenacetin, which was subsequently recognized as *mononitrophenacetin*, or $C_6H_3.OC_2H_5(4).NO_2(3).NHCOCH_3(1)$, is at about 103° C.

SOUTH AFRICAN ACACIA GUM.

The Acacia horrida, or "Doornboom," which yields a considerable part of the gum arabic brought upon the English market from South Africa, is one of the most widely distributed forms of vegetation in that part of the globe. A recent account of the economic products of German southwest Africa furnishes some particulars of the collection of the gum in the colony. The gum can only be gathered in the dry season, when the collection is much impeded by the want of drinking water and of laborers—the whole colony of German southwest Africa, a country as large as England and Wales, having only about 24,000 inhabitants. The value of the gum in the interior is about 50 per cent. of the price it realizes on the London market. The cost is increased by 20 per cent. by the transportation to the coast, by another 40 per cent. for carriage from the coast to Cape Town, and again by 40 per cent. for freight from that port to England. The bark of the tree is a valuable tanning material, hence the tree is frequently cut down altogether when its gum is collected.

SALICYLATE OF PHYSOSTIGMINE.

Chemical handbooks direct this salt to be made by dissolving 2 parts of physostigmine and 1 part of salicylic acid in 30 parts of boiling water, and to set the solution aside in a dark place so that crystals may form. There is this difficulty, however, that the free alkaloid physostigmine (or eserine) is exceedingly prone to be converted, under the influence of air and light, into rubeserine, which has a red color. Birkenwald advises (*Pharm. Zeitsch. f.*

Russl.) the following method by which the salicylate may be prepared in colorless crystals: Dissolve sulphate of physostigmine in water, add sodium bicarbonate in excess, shake with several portions of ether in a separator, and filter the united ethereal fractions into a beaker into which some ether containing the calculated quantity of salicylic acid had previously been put. The salicylate of physostigmine will separate in crystals, is then transferred to a filter, washed with ether, and dried in a dark place in vacuo.

NEWS AND MISCELLANY.

PRACTICAL TEACHING OF MIDWIFERY.

Additional provision has recently been made for the teaching of midwifery in connection with the University of Melbourne, Victoria. The University lecturer on diseases of women has been appointed an honorary medical officer of the Women's Hospital, and a ward in the midwifery department has been placed at his disposal. Further, a day has been fixed upon which he will see out-patients, and he has been allotted three beds in the infirmary department. It may be hoped that the arrangements for teaching the subject will be carried out on a thorough and, we may add, antiseptic system. The arrangements which were lately described in the "Notes on Paris Hospitals" in the *British Medical Journal*, at the Hôpital La Charité, and the installation for isolation and disinfection devised by Dr. Budin will serve as a recent and well-thought-out model. We understand that similar arrangements on a large scale are in progress at St. Mary's Hospital, London.—*Ex.*

FIRE-PROOFING FORMULÆ.

While it at present is impossible to make combustible materials absolutely fire-proof, yet it is practical to apply to them substances which will greatly retard their combustibility. The following formulæ will be found useful for curtains, theatrical scenery, decorations and other tissues that will absorb liquids. For light tissues: Ammonium sulphate, 16 pounds; ammonium carbonate, 5 pounds; sodium fiborate, 4 pounds; boric acid, 6 pounds; starch, 4 pounds (or either dextrin or gelatin, 1 pound); water, 25 gallons. The salts are dissolved in a part of the water, the starch or its substitutes in another portion by heat, and mixed; then the goods may be immersed in them, dried and calendered or ironed. For curtain materials, theatrical decorations, wood, furniture, use ammonium chloride, 30 pounds, in the same quantity of water, and add chalk of very fine quality to make a thin paint, and apply warm.—*Ex.*

A CURIOUS LAW SUIT.

A novel action for damages is reported to be pending somewhere in the German Empire under somewhat curious circumstances. A nurse allowed skin grafts to be snipped from her lily-white arm in deference to the wishes of the patient and the request of the surgeon. Unfortunately, the wound did not heal, as might have been anticipated, but proved the starting point of cellulitis, causing great suffering, permanent disfigurement, and some loss of function. The nurse consequently feels aggrieved, and claims damages from the surgeon, but the damages, if any, would seem to be due from the person on whose behalf the plaintiff consented to create the solutions of contumely in her cutaneous envelope.—*Med. Press.*

PASTEURISM AT MILAN.

On July 1st, 1889, a Pasteur institute was opened at Milan in connection with the Ospedale Maggoire, under the direction of Dr. Remo Segré, who had studied the details of the method at Paris under the guidance of M. Pasteur himself. The report of the first two years of work done in the Milanese Institute, which has recently been published, shows that 238 patients have been treated during that time, of whom 108 were bitten by animals experimentally proven to be rabid, and 121 by animals certified to have been so by medical practitioners and veterinarians. Nine cases are returned as "doubtful." Besides these, 61 persons applied for treatment who were proved not to stand in need of it. Of the 238 patients treated, 4 died, 2 of whom belonged to the first class (in which the proof of rabies was experimental), and 2 to the second (in which the disease was proved by veterinary certificate). All the four cases died after the

completion of the treatment, two "a few," one 17, and one 63 days after it. In 232 cases the animal which inflicted the bite was a dog, in 6 a cat. Dr. Segrè uses a syringe of the capacity of 2½ grammes, and employs a whole centimetre of medulla for each person to be inoculated, even in the case of young children. He thus obtains an emulsion of greater density, and therefore, he believes, "richer in curative principles and more active." In a total of 5,386 injections made on 238 persons, he has only twice seen the operation give rise to a small abscess.—*Brit. Med. Jour.*

SNAKE BITES.

Sir Joseph Fayrer, in a lecture at the Victoria Institute on "The Venomous Snakes of India and the Mortality Caused by Them," remarked that the chemistry of snake poison had been studied a good deal of late, and it was shown to be a most virulent poison, which might neither be sucked from a bite nor swallowed with impunity. Many antidotes had been reported beneficial, but experience showed that so far no physiological antidote to snake virus was known, and that when the full effect was produced remedies were of little avail. When, however, the poison had entered in smaller quantities, medical treatment might be of service. The cobra, the most formidable of the Indian snakes, was to be found all over Hindustan, and was equally dreaded and fatal wherever met with. There were many other species which were also most destructive to life—notably, the krait, the kupper, Russell's viper, the hamadryas, and the raj-samp. The mortality from snake bite in India was very great. The average loss of life during the eight years ending 1887 was 19,880 human beings and 2,100 head of cattle yearly. Throughout India in 1889 there were 22,480 human beings and 3,793 cattle killed by snakes, while 578,415 snakes were destroyed at a cost of 23,556 rupees. In 1890 there were 21,412 human beings and 3,948 cattle killed, while 510,650 snakes were destroyed at a cost of 19,004 rupees. The average result for all the provinces showed a mortality of one to every 10,155 of population in 1890, as compared with one to every 9,673 in 1889. To reduce this annual loss of life, it was necessary to make known the appearance and habits of the poisonous snakes and to institute proper rewards for their destruction. Until some measures were more uniformly resorted to, there would be no material diminution in the loss of human life from snake-bite, which could not now be rated at less than 20,000 annually. It was satisfactory to find that the Government of India were insisting upon measures having for their object the destruction of snakes; but he feared that the proposal to cut down and clear away the jungle in the vicinity of villages could hardly be expected to produce the desired effect. He would suggest that a reward should be given for each poisonous snake killed.—*Brit. Med. Journ.*

SOCIETY MEETINGS DURING MAY.

Kentucky State Medical Society, May 1st, at Louisville; State Medical Society of Kansas, May 3d, at Fort Scott; Ohio State Medical Society, May 3d, at Cincinnati; Wisconsin State Medical Society, May 4th, at Milwaukee; Michigan State Medical Society, May 5th, at Flint; Nebraska State Medical Society, May 10th, at Omaha; Indiana State Medical Society, May 12th, at Indianapolis; Illinois State Medical Society, May 17th, at Vandalia; North Carolina State Medical Society, May 17th, at Wilmington; Medical Association of Missouri, May 17th, at Pertie Springs, Johnson Co.; State Medical Society of Pennsylvania, May 17th, at Harrisburg; Iowa State Medical Society, May 18th, at Des Moines; Connecticut State Medical Society, May 24th, at New Haven; Association of American Physicians, May 24th, at Washington, D. C.

ASSOCIATION OF AMERICAN INSTITUTIONS FOR IDIOTIC AND FEEBLE-MINDED PERSONS.

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CLINICAL LECTURES.

CARDIO-VASCULAR GRIPPE.*

By H. HUCHARD, M. D.
PARIS, FRANCE.

A CLINICAL LECTURE DELIVERED AT THE HÔPITAL BICHAT.

Gentlemen :—I have, in a previous lecture, described the different manifestations of cardiac grippe, especially with reference to the action of the poison upon the endocardium, the pericardium and the myocardium. I have not, however, as you will see, exhausted this interesting subject, and I have endeavored to show you that in this disease, the nervous system, more than in any other infectious disorder, is profoundly affected.

MEDULLARY AND VAGO-CARDIAC GRIPPE.

The grippal poison acts upon the nervous mechanism of the heart through the medulla oblongata and the pneumogastric nerves, the functions of which are often greatly disturbed. I will not speak of the intra-cardiac ganglia, the normal anatomy of which is more or less obscure, and the lesions or functional disorders of which, likewise, belong generally to the domain of simple hypotheses.

I have for a long time been struck, especially during the epidemic of 1889-1890, with the lack of concordance in certain grippal pneumopathies existing between the relative benign character, the slight intensity of the lesions, and the gravity of the dyspnœic symptoms. Thus you have observed patients presenting only a few sub-crepitant râles over the chest succumb to an acute attack of asphyxia. At other times, these signs have accompanied pulmonary congestions of hæmoptoic form, attended with true and quite abundant hæmoptysis, which have terminated in death of the patient within a few hours. Still in another class of cases, the pulmonary congestion is slow in its development ; it is sub-acute, resisting, during weeks, all therapeutic treatment. Finally, you have seen the occurrence of a super-acute œdema of the lung accompanied with a kind of albuminous expectoration and a most dreadful dyspnœa to which patients rapidly succumb.

In the course of these various complications, the pulse is sometimes unusually rapid, or, on the contrary, abnormally slow. Again, in certain cases, the gastric phenomena (incessant vomiting, acute dilatation of the stomach, etc.) exhibit a most serious character. The three branches of the pneumogastric are affected, and it is not enough to say with Vovart, that the grippe is particularly characterized by "a neurosis of the vagi," it must be said especially that these nervous manifestations are of a paralytic character. In influenza, let me repeat, the pneumogastric nerves appear as if they were severed, and thus the various congestive phenomena of the lung may be explained, phenomena which I have spoken of as "pulmonary paralysis." These conditions were recognized by Graves, and I, myself, have studied them under the name of *bronchoplegia*. In these cases patients die from being literally asphyxiated, but they may likewise succumb very rapidly under various symptoms of heart paralysis, of *cardioplegia*, since the cardiac branches of the vagi are the ones principally affected.

The disease, whose poison is carried to the whole nervous system, may particularly alight upon the medulla oblongata. This *bulbary* or *medullary* form is quite frequent. I called attention to this point three years ago, and thereafter other

*See issues of the Reporter of April 9 and 16, 1892.

authors have published cases similar to those I, myself, have described. Lately, Kelsch and Antony (*La Grippé dans l'armee Française* in 1889–1890) have said that the peculiar affection of the medulla is not of rare occurrence in the Army, and that it has usually made itself manifest by symptoms of syncope and lypothemias. I have, myself, observed a medullary phenomenon *par excellence*, that is, the Cheyne-Stokes respiration, and this in the absence of all renal lesions. Finally, we can refer to the medulla many cardiac symptoms dependent upon a disturbance of the functional activity of the vagi, such as *tarchycardia*, *brachycardia*, certain phenomena of *cardiac collapse*, *cardiactasis*, and *cardioplegia;* those dependent upon paralysis of the lungs and bronchi (*bronchoplegia*), and the œdemas, or vagoparalytic pulmonary congestions; as also certain super-acute emphysemas. It is important to be acquainted with this medullary form; to this have been due the rapid or sudden deaths reported by almost all the ancient historians of the disease in question.

I have, myself, reported many cases of this nature to the Societè Mèdicale des hôpitaux (*Soc. Méd. des hôpit.*,) January 24, 1890), some of which are as follows: One of our lamented country colleagues died in the following manner: He was suffering from a slight bronchitis; from time to time he would be taken with marked attacks of suffocation, which would be brought on even by slight exertion; the pulse would become accelerated, the patient being threatened, at every moment, with syncope. He died suddenly through failure of the heart, after many lypothemic attacks, without there being anything to announce such a brusque termination. Another patient exhibited simply symptoms of an infectious gastric embarrassment. He died from syncope, notwithstanding that auscultation had revealed nothing abnormal. A man, 60 years of age, had all the symptoms of a gastric trouble, which rapidly assumed an infectious character, and the general prostration was so marked that the attending physician believed it to be the beginning of an enteritis. (I have often showed you, during the epidemics of 1890 and 1891, cases of this grippal *pseudo-typhoids* through which errors of diagnosis have been made). This patient had a cerebral excitement with an irresistible tendency to somnolence; a little albumen was found in the urine, and over the base of the right lung, small, fine râles, indicative of pulmonary congestion, were noticed. Finally, there appeared in a rapid manner, arythmia, and attacks of cardiac intermittence, this latter phenomenon being definitely established later. One night death was imminent; the pulse was weak, compressible, filiform, and became better only after many hypodermatic injections of ether and caffeine. On the following night, the patient was threatened with cardiac collapse. During a whole hour the pulse was weak and could hardly be felt under the finger, the fluttering condition of the heart being quite noticeable; the extremities became cold and cyanosed, the skin covered with a cold sweat, and the patient was thrown into a state of lypothemia and continued somnolence. In one word, it seemed as if death would occur at any moment, and, therefore, I gave, one after another, five subcutaneous injections of ether and caffeine. An hour later, the pulse recovered its force and regularity, and by next morning, all these symptoms had disappeared. On the reappearance of these serious symptoms the injections were resorted to with the same happy results.

You see, then, that therapeutics is not entireless powerless, and in order to treat such symptoms with higher probabilities of success, it becomes necessary that we should be thoroughly acquainted with them.

CARDIO-VASCULAR AND VASCULAR GRIPPE.

a. The *pulse* often presents that character which I have spoken of as unstable. Such phenomenon consists in this: From the moment that the patient passes from the horizontal to the vertical position, that is when he sits upright, the pulse becomes accelerated, going up as high as 80, 120 and even 130 per minute. This is a sign of cardiac weakness and of depression of the arterial pressure, and is especially observed during convalescence. It must not, however, be confounded with the unsteady pulse described by Graves in the following terms: "The pulse rarely exhibits identical characters. You will find it rapid and hard; 6 hours later it will be rapid and soft, and later still, after 6 or 8 hours more or less, it will show a normal frequency;

but by the following morning it will have become quick and jerky . . . . But the most remarkable fact is that towards the end of the malady, the pulse sometimes becomes full, strong and vibrating, and this is observed upon individuals who have suffered for whole weeks."

In the course of the various pulmonary manifestations (pneumonias, bronchopneumonias, etc.) the pulse frequently exhibits a rapidity proportionate to the height of the febrile movement. Yet, at other times, an absolutely opposite phenomenon is observed, the cardiac beat being relatively slow, which is in great part due to the medullary or bulbary disturbances.

This relative *brachycardia* did not escape the sagacious observations of older authors. Thus in the epidemic of 1837, according to Landau, "the pulse, ordinarily large and full in this disease, was small and slow, and except in two patients in whom it attained a rapidity of 82, it did not go beyond 72; generally it varied from 60 to 68." Valleix, who has generally held a contrary opinion, is forced to admit that "the pulse appears to have less amplitude . . . . Its acceleration does not, in the majority of cases, bear any relation to the violence of the febrile symptoms." This is a fact which has been noticed in quite a large number of cases, and which pleads in favor of the action of the grippal poison on the pneumogastrics.

From this point of view there is one disease which resembles influenza, and that is, typhoid fever, characterized, as you well know, by a relative slowness of the pulse, which is at the same time a favorable prognostic sign. Typhoid fever, likewise, resembles influenza in its action upon the arterial contractility, and, similarly, in the considerable diminution of the vascular pressure.

b. Condition of the arterial pressure.— You already know that typhoid fever is characterized by a low arterial pressure, this being one of the chief causes which produce in this disease the formidable syndrome known as *embryocardia*. Again, my numerous researches regarding the state of the arterial pressure, have shown that ordinarily there is in influenza a considerable diminution (*Soc. Méd. des Hôpit.* March 14, 1890); hence, embryocardia is not rare in this affection.

This embryocardiac syndrome studied by Stokes under the name of "fœtal rhythm of the heart-beat" but which does not appear to comprise its pathogeny nor its prognostic importance, is due, according to my investigation, to the extreme lowering of the arterial pressure and to the weakness of the heart. It is characterized by 3 fundamental symptoms: 1, *tachycardia*; 2, equalization in the duration of the two pauses; 3, a similarity in the thrill of the two sounds. Thus, the embryocardiac beats resemble those of a pendulum, or those of a fœtal heart. Again, the appearance of this sign has a great prognostic importance, as it may sometimes announce the fatal termination of the malady in a longer or shorter period, if a remedy is not promptly given. The best medication consists in the administration of remedies that constrict the blood-vessels and elevate the pressure, such as ergotine and caffeine. I have observed this syndrome in many cases, during the course of the disease and even during the period of convalescence. It will be sufficient to report the following instance: A patient, 51 years of age, suffering from the grippe, was suddenly attacked by cardiac symptoms: pulse feeble, almost imperceptible, and difficult to count (160 per minute); sensation of retro-sternal constriction and constant oppression; cyanosis of the hands and extremities; coldness of the surface; a precipitated action of the heart, the beats, 200 per minute, being equal in thrill and intensity, separated by the pauses of absolutely equal duration (embryocardia). The patient died 40 hours after the onset of these symptoms; there was no elevation of the temperature; on the contrary, there was a quite marked tendency to a diminution of the bodily heat.

Embryocardia is sometimes the precursory phenomenon of *cardiac collapse* to which the patients rapidly succumb.

c. Grippal arteritis and phlebitis. Do the arteries suffer directly under the influence of the grippe, in other words, is there such a thing as a *grippal arteritis*? The question remains *sub judice*. I will, nevertheless, bring to your notice the fact that in an autopsy I have found an obliterating inflammation of the coronary arteries. On the other hand, Rendu has recently reported a case of gangrene (*Soc. Méd. des Hôpit.*, January 15, 1892) of the extremities, after an attack of the grippe. But, as has been observed by Netter an arteritis may be found in the neighbor-

hood of a clot, and here again we have an analogy with the condition met with in typhoid fever.

A fact which I have observed and which was not unrecognized by the older historians of the disease, is that pertaining to the great frequency of *cerebral hæmorrhages* occurring during the course of an epidemic. I do not pretend to say that the grippe *per se* is capable of producing this accident; but I cannot help believing that the malady in question enhances the rupture of the miliary aneurisms of the brain.

Grippal phlebitis is better demonstrated, of which I, myself, have observed four cases. In this respect I will recall the case of double phlebitis of the inferior extremities occurring in a boy-patient, following an attack of the grippe, and which was complicated with serious symptoms of pulmonary embolism. My colleague, Ferrand, has, likewise, reported two cases of phlebitis of the lower extremities, this condition occurring after an attack of influenza (*Soc. Med. des Hopit.*, March 14, 1892).

d.–Action of the grippe on cardiopathies. This is another category of the action of the disease, that deserves your most serious attention. I have often spoken to you about the chronic maladies aggravated by influenza, and of the kind and amount of aggravation of such maladies. I have shown you a large number of valvular affections of the heart in which the rapid aggravation could be dated from the very day that patients were attacked by the grippe. From that time, the cardiopathy, compensatory or latent, rapidly arrives at a hyposystolic, and at the same time at a definite asystolic period. An explanation of this is found in the tendency of the grippe to diminish the arterial pressure. Again, you know that the lack of compensation in diseases of the heart is due, in great part, to the lowering of the arterial pressure, and you can understand why influenza, bringing about an asystolic condition, rapidly aggravates a pre-existing cardiopathy, and it does so more readily than through an influence on the nervous mechanism of the heart

This aggravating influence is also exercised on arterial cardiopathies. In three cases of angina, the sternocardiac crises were quite frequent and severe. In one case, laboring under an interstitial nephritis, an attack of influenza produced a rapid fatal termination through a sub-acute œdema of the lungs. In one word, arterial cardiopathies are evolved with marked rapidity, and appear as complications of arythmia, cardiac intermittance and cardiac asthenia. I have seen a large number of cases of arterial sclerosis of the heart, which, while latent from a symptomatic point of view, were made manifest after an attack of influenza under a persistent arhythmic form. On the other hand, in the absence of all lesion of the myocardium or of the valvular apparatus, or by virtue of a simple functional affection, the arhythmia may appear suddenly during the course of the malady under consideration or during the period of convalescence, remaining then as a permanent symptom.

An interesting case has been reported by H. Blanc (L'arteriosclerose en general et les scleroses vasculaires dans l'armee, *Arch. de Méd. Militaire*, 1891) which sustains what I have said regarding the aggravating influence of the grippe on arterial cardiopathies. It is as follows: A soldier exhibiting all the appearances of a perfectly healthy individual, suffered an attack of grippal broncho-pneumonia. After his recovery he continued to suffer from dyspnœa; on examination there was found a marked systolic murmur over the third intercostal space of the right side. At first it was thought to be a simple extra-cardiac murmur; but three months afterwards, the diagnosis of an arterial cardiopathy was made. Here was a patient without any renal or pulmonary trouble, and in whom the orifices of the heart were healthy; the symptoms came on after an attack of the grippe and the slightly perceptible hypertrophy noticed at first, had become more and more marked. Here, then, the relation of the cardiac affection to the grippe was quite clear.

However, it is only late, that is, after a year or two or perhaps many years, that cardiac symptoms following an acute infectious malady are made manifest. This shows that the effects do not always immediately follow the causes which produce them. If after an attack of influenza, typhoid fever, small-pox, scarlatina, etc., you do not find any trouble in the heart during the march of the disease or during the period of convalescence, you must not, however, neglect to practice cardiac auscultation. The lesions following these various affections may remain latent for a

long time; they may require months or even years to make themselves manifest; and many times you may and will meet with aortic insufficiencies the ætiology of which you are at loss to account for, and this because you have failed to recognize the influence that any one of the infectious diseases referred to may have exercised.

If coronary endocarditis of grippal origin really exists, of which I have had occasion to show to you one example, you can understand why it remains latent until it alights upon the cardiac muscle to produce degeneration. You would be wrong in dating from this day the appearance of the cardiopathy, and you see the importance of not confounding the *apparent* with the *real* beginning of a disease. Inflammation of the coronary arteries may commence and has commenced during the march of the affection or during the period of convalescence from the grippe; the lesion progresses in a quiet manner undetected by your ear; and the consequent degeneration of the myocardium is at last made apparent by a marked symptomatology. Bouchard has remarked: "The infectious diseases produce often tardy consequences. While the pathogenic germ may be destroyed, the disease is not at an end; man continues under its influence, and after a long time, it appears in certain tissues and apparatuses through lesions which are the expression of a tardy disturbance of nutrition brought about by an infectious malady."

e.—Grippe and rheumatism.—According to my observations, rheumatic troubles are of frequent occurrence during and after epidemics of influenza. This fact has not escaped the notice of ancient authors and thus Lancisi who has wrongly assimilated, so to speak, the two affections, has given to influenza the name of *rheumatic fever.*

I have observed two cases in which an acute articular rheumatism was developed during the course of influenza and during the convalescence from the disease. In the first case I noticed the coming of an endopericarditis which could be attributed to rheumatism and not to the grippe. This is a source of error to which I desire to call your attention; you must not attribute to the grippe an endocarditis which is dependent upon a rheumatic affection. Let me remind you of the fact that influenza, more than upon the endocardium and pericardium, it exercises an action on the nervous mechanism of the heart.—Translated from *Le Bulletin Medical*, March 13, 1892.

ALLEGED SYPHILITIC INFECTION BY INSTRUMENTS.

BY G. FRANK LYDSTON, M. D.,
CHICAGO.
PROFESSOR OF DISEASES OF THE GENITO-URINARY SYSTEM AND SYPHILOLOGY IN THE COLLEGE OF PHYSICIANS AND SURGEONS.

Gentlemen:—The first case which I present to you this morning is one of unusual interest, involving as it does certain interesting clinical features of syphilis and some points in what might be termed the jurisprudence of syphilis.

The patient, a woman of about 40 years of age, who, as you see, is a stout, healthy looking individual, was referred to me by a prominent physician as a case of syphilitic infection probably due to unclean instruments in the hands of a respectable practitioner of this city. The woman gives a history which, taken in connection with her present condition, most effectually proves the error of the charge against the doctor by whose unclean instruments the case was supposed to have been infected. This is a matter of congratulation, as the patient herself has apparently been very acrimonious and disposed to make trouble for her physician.

The history of this patient is as follows: Six weeks ago she consulted her doctor for treatment for a sore throat, which had then lasted about a week. The doctor, she claims, told her that she had pharyngitis and enlarged tonsils and made some applications to her throat, using as she expresses it "an old brass thing," which hurt her tongue and made it sore for several days. One week later she says she noticed an eruption upon her body. She denies any local trouble and declines any examination. She says that she has had absolutely no exposure to possible venereal infection. On examining the face, you will notice a distinct erythema involving the nose, the inner aspect of the cheeks, the lips and the chin. On palpation I find this erythematous area to be slightly raised from infiltration, the skin

being slightly stiff to the feel. There is no tenderness and no heat in the parts. Here and there upon the face we observe an eruption of papules, some few of which are scaly. I find upon the scalp papulo-pustular and papulo-crustaceous syphilides. Just at the roots of the hair and extending down for a few lines upon the forehead you will observe a crown-like and symmetrically arranged series of distinct rows of papules, presenting the characteristic livid red color of the syphilide. Upon the neck and chest we observe a fading macular eruption, the *roseola syphilitica*, interspersed with papular and papulo-squamous lesions. Upon the palms are found scaly papules, and the patient claims that similar lesions are present upon the soles of her feet. We will now proceed to examine the mouth to see if we can find anything suggestive of a chancre. On careful inspection I fail to find any vestiges of what might be even suspicious of an initial lesion either in the mouth or pharynx, or upon the tongue. I find at the base of the tongue at the point where the patient seems to believe infection occurred, a characteristic mucous patch, in no wise different from a number of others upon the tongue. I observe several rhagades or fissures upon the sides of the tongue. There is a liberal supply of mucous patches upon the buccal mucous membrane and several in the larynx, the tonsil upon the right side containing one of good size. The fauces and pharynx present the characteristic appearance of a syphilitic sore throat. You will notice that the left eye presents a redness of the conjunctiva and the patient claims that it is very sensitive to light, and that she has had considerable pain in and about the eye for several days. I find on examination that the pupil is sluggish in its reaction to light, and that the iris appear a little swollen and cloudy and of a more grayish color than natural. We have, in other words, characteristic evidences of syphilitic iritis. The *ensemble* of lesions in this case presents as pretty a picture of marked early secondary syphilis as could be wished. We will now dismiss the patient and proceed to consider the merits of this case.

To the uninitiated the history of this woman, as she gives it, might seem to have a very important bearing upon the professional skill of the physician whom the patient accuses of infecting her with syphilis. Fortunately for the medical profession,—and sometimes for accused individuals among the laity,—syphilis is a disease which has a very typical and reliable course of evolutionary progression. The fact that this woman has had this eruption for four weeks proves conclusively that the accused physician could not possibly have infected her at the time stated. As this physician had not treated her throat before, his innocence is thoroughly established. Wherever the location of the primary lesion may have been in this woman, said primary lesion must have antedated the appearance of the eruption several weeks; in all probability, at least four, and more likely six or eight weeks. There is little doubt in my mind that the eruption existed upon her body prior to the time she states and was probably present at the time she consulted the physician for sore throat. That sore throat was in my estimation syphilitic, and in all probability the inconvenience that the patient experienced from the use of the tongue depressor at the hands of the physician was due to irritation of the already existing mucous patch upon the base of the tongue. Of course, at this late period there would be little likelihood, even though infection occurred in the manner stated by the patient, of my finding remains of a chancre in the mouth. Still, as the woman has not been properly treated, and there are present in the mouth all of the conditions essential to the protraction of irritation, it would be by no means surprising,—admitting that infection had occurred in the mouth,—for us to find at the present time chancrous erosion or ulceration. If a characteristic chancrous lesion were found, it would show at least that the infection did occur via the mucous membrane of the mouth or tongue according to the situation of the sore. The presence of a chancre wherever found would not, however, change my opinion in the least as regards the date of infection. This woman was probably infected in the good old fashioned way some twelve weeks or so ago.

I wish, gentlemen, to call your attention by means of this pertinent illustration to the necessity in cases of syphilis of obscure origin, or cases in which an accusation is made against a physician of having produced syphilitic infection by means of unclean instruments, of studying carefully the natural history, the characteristic

evolution, so to speak, of alleged vaccinal syphilis. The physiological disturbance incidental to the febrile reaction from vaccinia sometimes brings to the surface dormant syphilitic conditions, and the practitioner performing the operation of vaccination might possibly be given a great deal of annoyance, or even have his reputation seriously impaired by the accusation of having infected the patient by impure virus or an unclean syphilized lancet. If the physician can prove uneqivocally that he used bovine virus, and if he can show that he has performed his scarification with the ivory point itself, he has a pretty clear case, otherwise there is a certain element of insecurity in his position. If immediately following the vaccination, i. e., within a few days or a couple of weeks or so, a generalized eruption occurs, even admitting this eruption to be of a syphilitic nature, it cannot possibly be due to infection during the vaccination, for there is a distinct incubation period following the introduction of the syphilitic poison before the local sore appears, and another apparent period of incubation—the so-called secondary period of incubation, intervening between the appearance of the chancre and the development of a generalized eruption. Within certain limits this division of the evolutionary course of syphilis into periods of some weeks duration is very arbitrary. In order to prove infection at the hands of the physician it must be shown that a local duration or some peculiar transformation of the vaccinal vesicle has occurred, appearing on the average 21 days after the operation of vaccination, this being followed by a period of quiescence of on the average six weeks duration, which period of quiescence is succeeded by general manifestations of syphilis. Then too, the character of the lesions in alleged cases of surgical infection with syphilis is very often significant. If, for example, a child after vaccination, or a patient after a surgical operation, should develop within a few weeks bone or periosteal lesions, or any of the various phases of gummy deposit characteristic of late syphilis, it would certainly throw the case of infection on the part of the physician out of court.

Note.—I have since corresponded with the gentleman whom this woman accused of having infected her by means of unclean instruments. I find that the woman is the proprietress of a disreputable lodging house run for the benefit of *nymphs du pave*, and that while she had no generalized eruption as far as the doctor knows, she was suffering from mucous patches upon the tongue and tonsils at the same time he made his applications. The physician is one of our most competent practitioners.

CONCEALED CHANCROID WITH SLOUGHING.

The next case to which I will call your attention is a young man who has been suffering for some weeks with some trouble with his penis. He states that four or five days after suspicious exposure he developed several small ulcerations, upon the penis apparently from his description situated just back of the corona glandis. Within a few days the prepuce, which was always redundant and retracted with difficulty, became greatly inflamed, and he found that he was unable to retract it. The inflammation and swelling have gone on until to-day you notice that the prepuce is very much elongated and swollen and on pinching it up between the thumb and fore finger, I find that it is quite hard in consistency. Issuing from the preputial orifice, you notice a thick, greenish, extremely virulent looking purulent discharge. On the superior surface of the prepuce just over the glans, you will notice a discolored area in the middle of which there is a ragged, irregular opening. This is the first beginning of sloughing of the tissues of the prepuce. Evidently a spot corresponding to this aperture has become gangrenous and has sloughed away, leaving an ulcerated and sloughed area of tissue behind it. I have no doubt that the test of auto-inoculation would show conclusively if we cared to wait two or three days for this evidence, that we have to deal with here a case of concealed chancroid. The history of the case, however, and the appearance of the parts are sufficient for a diagnosis. Now, the question arises; has this patient true syphilis? Without an inspection of the parts it would be impossible for any one to pass an opinion upon this point. Even upon inspection it might be impossible to say at this early period whether the patient has syphilis or not. I find upon inspection of the groins a well marked bubo upon each side. There is yet no fluctuation, but from the diffuse character of the inflammatory glandular swelling, the dusky appearance

of the skin over it and the extreme tenderness of the part I can safely predict that within a few days suppuration will be evident. I might remark in this connection, gentlemen, that even at this stage of the development of the bubo, there will be found in every one of these cases more or less purulent infiltation. We will not expatiate upon this point at this juncture.

The question arises, what shall we do with this particular case? All of the standard works upon genito-urinary diseases say: Do not do any cutting operation in these cases of concealed chancroid, as infection of the cut surfaces will invariably occur and a huge chancroid of a size proportionate to the extent of the incision invariably result. The question at issue in such cases is, which is the better practice? To allow these chancroids to go on in their course of destruction beneath the swollen and infiltrated phimosed prepuce, or shall we lay the part open to inspection and thus permit free drainage, cauterization and antiseptic treatment? Suppose the incision does become infected, is not the resulting ulceration open to inspection and treatment? And is not its occurrence more than counter-balanced by the increased facility for treating the hitherto concealed chancroids after the operation? This much I may say, the cure of a case of this kind after incision, is a matter of weeks; without incision, it is a matter of months. We have as a rule, only to fear more or less destruction of the prepuce after thorough exposure of the chancroids beneath it by incision, whereas, in case they are allowed to remain concealed serious destruction of the glans penis may occur. Concealed chancroids are a standing invitation to phagadena and gangrene and serious destruction of penile tissue. Despite the doctrines inculcated by our most eminent authorities upon venereal diseases, I believe that the proper treatment for concealed chancroids is to lay the prepuce open upon the dorsum after the part has been antisepticized by means of the peroxide of hydrogen, followed by a solution of bichloride of mercury 1-1000, injected beneath the prepuce. Any existing sores are then to be cauterized and the parts dressed with iodoform. When upon exposure of the chancroids they are found to be located upon the prepuce and not upon the glans penis, a complete circumcision should be performed, provided we can thereby remove the chancroids. This, however, should not be done until the parts have been thoroughly deluged with antiseptic solutions and the chancroids thoroughly cauterized. I have operated upon such cases in this manner and had them heal by first intention, and I cannot say that I have ever operated upon a case where I had occasion to regret it. I must say, however, that I have on several occasions been unjustly criticised by some of my professional brethren who are adherents to the dogma of infallability of authorities and into whose hands cases upon which I had operated subsequently fell. If phagedena does not attack these cases after the operation they do perfectly well, and phagedena is much less likely to attack the parts after than before an operation.

I will proceed in this case to lay the prepuce open as I have directed. I find on slitting it open upon a director several chancroids upon the prepuce itself. These I will cauterize thoroughly with carbolic acid. I will then trim off the ragged prepuce and thus make a complete circumcision. I will now, after stitching the cut edges together, apply powdered iodoform with a small iodoform gauze roller bandage. The wound may possibly not heal by first intention, but if not, the parts will be in much better condition for healing than prior to the operation. It would not surprise me at all to find within a few days on redressing the part that the incision has healed by first intention.

TRANSMISSION OF TUBERCULOSIS BY THE SEMINAL FLUID.

At a meeting of the Society of Anatomy and Physiology of BORDEAUX, SOLLES (*Journal de Médecine de Bordeaux*, 1892, No. 5, p. 52) reported the results of experimental inoculation of two guinea-pigs, the one with the fluid expressed from the testicle of a tuberculous subject, and the other with the spermatic fluid obtained from the seminal vesicle of another tuberculous subject. In the first, the induration at the site of inoculation slowly disappeared, without involvement of adjacent glands, and the animal recovered. In the case of the second guinea-pig, fatal general tuberculosis developed. The evidence, in so far as furnished by a single case, points to the hereditary transmissibility of tuberculosis.

COMMUNICATIONS.

SHALL PHYSICIANS BECOME SALES-AGENTS FOR PATENT MEDICINES?*

By SOLOMON SOLIS-COHEN, M. D.
PHILADELPHIA.

Section 4 of Article I of the By-laws of the Philadelphia County Medical Society reads as follows:

"Any physician who shall procure a patent for any instrument of surgery, or who sells or deals in patent remedies or nostrums, or who shall give a certificate in favor of a patented or proprietary remedy or patented instrument, or who shall enter into an agreement with an apothecary to receive pecuniary compensation or patronage for sending his prescriptions to that apothecary, shall be disqualified from becoming or remaining a member."

Article VIII of the By-laws of the Philadelphia County Medical Society, accepts as an integral portion of those by-laws, the Code of Ethics of the American Medical Association.

A section of that code of ethics treats "Of the Duties of Physicians to Each Other and to the Profession at Large." Article I of that section sets forth "Duties for the Support of Professional Character." Section 3 thereof condemns open or underhand advertising as "derogatory to the dignity of the profession." "These," it says, "are the ordinary practices of empirics, and are highly reprehensible in a regular physician." Section 4 continues:

"Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine, or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or of others. For if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality, and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them."

To the clearness and force of this dictum nothing can be added. Its wisdom and its justice are beyond dispute.

It is unfortunately true that much of our therapeutics is as yet empirical. Nevertheless the best endeavors of the true physician are directed toward establishing a rational basis for that which experience has proved to be beneficial; toward obtaining scientific data by which to make progress to a therapeutics not empirical; and toward eliminating from the traditional heritage of the profession such measures as may have had their origin in superstition or mistaken observation. To use preparations of unknown composition; to use mixtures of innumerable substances, some directly opposed to each other; to use even rational and known combinations of which the ingredients and proportions have not been adjusted to the indications and conditions of the individual case—are certainly not scientific methods or practices likely to advance rational therapeutics.

That much of the flavor of the mystery and witchcraft that at one time appertained to the practice of the healing art should have survived among the vulgar, is only a phenomenon to have been expected in the natural course of social evolution. Hence it is that homœopathy, and mind-cure, and patent medicines, have so powerful and so profitable a hold upon the purses of the community, and this not alone among the ignorant and the unlettered. It is a notorious fact that the clergy—presumably educated and intelligent men—are among the most prominent and persistent givers of testimonials to the virtues of advertised nostrums, and medical men and medical journals have long made the religious press a target for satire and invective, because of the hold that the advertising quack has secured upon its columns.

In an address to the Medical Society of the State of Pennsylvania at its last meeting, in calling attention to the alliance betweeen the secular press and the empirics and nostrum-venders, I felt justified in saying that the publishers of magazines and newspapers that allowed themselves to advertise the curative virtues of this or that ready-made preparation or alleged remedial measure, to be applied indiscriminatingly to all cases--whether of one disease or of many diseases—were accessories to a crime against the unfortunate and the

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helpless; not alone because of the money filched from the pockets of those deluded by the false promises held out to them; not alone because of suffering unrelieved and lives deprived of their chance for prolongation; but in many instances because of the disease and suffering and death directly produced by the poisonous compounds or noxious gases administered to any that chose to purchase. If such criticism was justified—and who is here that will deny its truth?—if such criticism was justified when applied to those who make no pretence of special knowledge or of devotion to a noble art—to those whose object is solely and avowedly commercial—what language remains to characterize the action of medical journals that permit the insertion in their columns of advertisements such as these that I pass around? *Journal of the American Medical Association*? What words of condemnation are strong enough for the physician that permits his name to be associated with these devices of the devil?

The frankly unscrupulous patent-medicine vender, the maker of "Safe-cures," or "Temperance Bitters," or "Sure-Specifics," is at least to be commended for what, to paraphrase a remark of Senator Benjamin Harrison's, may be termed his "bold brutality." His allegations of philanthropic motives are not intended to be believed; they deceive no one—they are the recognized *ad captandum* devices of the clever advertiser—and, in the sale of his wares, there is no pretence of examination, or of diagnosis, or of prescription based on diagnosis.

Far more iniquitous and far more dangerous to society is the wily manufacturer that advertises "to the profession only." Whether he ostentatiously holds secret the composition of his nostrum, or whether with pretended frankness he describes it with an appellative that means nothing, or publishes a formula that cannot be carried out, his object is the same; he seeks to make the physician's the hand whereby he may reach pockets shut from the coarser methods of the Warners, the Pinkhams, and the Jaynes; for, after all, it is the minority that can be deluded by the flaring posters of "Wizard Oil," or the lying testimonials of "Tonic Vermifuge." When a sick man applies to a physician, thinking that thereby he will secure the benefit of special knowledge brought to bear upon the conditions of the individual case, entrusting to the conscience of his medical adviser his health and his life, he is entitled to the skill and the thought for which he pays, and that he deems himself to be receiving. He certainly deserves better treatment than to be handed over to the mercies of "antikamnia," or "febricide," or "quickine," or "gleditschine," or "Freligh's tablets," or "Listerine," or any other of the unholy crew. If such is to be his fate, let him have the satisfaction of buying the worthless or poisonous stuff direct, without the sham of a professional consultation, and without paying a purchaser's commission to the medical sales-agent.

At the coming meeting of the State Society I purpose offering the following resolutions, for which I ask the support of this Society:

Resolved, That the Medical Society of the State of Pennsylvania hereby expresses its highest disapprobation of the practice of giving certificates or testimonials to secret preparations alleged to be of medicinal virtue, and calls the attention of the affiliated county societies to the fact that such action on the part of members of the said societies is in derogation of the dignity of the profession, and in violation of the letter and the spirit of the Code of Ethics of the American Medical Association and of this Society.

Resolved, That this Society likewise expresses its disapprobation of the practice of inserting advertisements of secret preparations in the columns of medical journals, such action being an insult to the intelligence of the profession, and a degradation of journals indulging therein to the level of the patent medicine almanac. Especially to be condemned is the action of the *Journal of the American Medical Association* in admitting such advertisements.

Resolved, That copies of these resolutions, duly attested by the permanent Secretary, be sent to all county societies in affiliation with this Society, to the American Medical Association, to State medical societies in affiliation therewith, and to the publishers and editors of American medical journals.

On motion of Dr. J. Madison Taylor, the resolutions were adopted as the sense of the Philadelphia County Medical Society, and the delegates to the Medical Society of Pennsylvania were instructed to officially present and support them.

DOES ORGANIC DISEASE OF THE HEART PRECLUDE THE USE OF CHLOROFORM IN PARTURITION? *

BY T. RIDGWAY BARKER, M. D.,

DEMONSTRATOR OF OBSTETRICS IN THE MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA; OUT-DOOR OBSTETRICIAN TO THE PENNSYLVANIA DISPENSARY.

In entering upon the discussion of a subject of such paramount importance to mother, offspring, and obstetrician, one cannot lay too much stress at the very outset upon the axiom that "A good remedy will fail of its effect if not properly administered." This fact must be kept uppermost in our mind if we would avoid fatal results, not due, however, to the employment of the agent, as some would make it appear, but to the lack of attention and care exercised in its administration. That there is a radical difference between surgical and obstetrical anæsthesia (analgesia), goes without saying. If we consider for a moment the stages of anæsthesia, which differ only in the profoundness of the impression—first, sopor; second, stupor; and, third, stertor—we cannot fail to notice that in analgesia one rarely has occasion to carry the effect beyond the first degree (sopor), while in the surgical variety we are obliged to advance beyond this and keep the patient in the second stage, or that of stupor, thus markedly increasing the gravity of prognosis.

In this connection, let us devote a moment's consideration to the progressive effect of chloroform vapor upon the nerve-centers of the cerebro-spinal system, beginning, as it does, at the inferior extremity of the cord, sacro-lumbar, and gradually extending its paralyzing influence upward until it reaches and expends its force upon the medulla oblongata. These well-established clinical observations having been verified by physiological experiment, we are justified in putting them to practical use. What other agent, may be pertinently asked, can relieve—aye, abolish—pain so quickly and safely, yet leave reflex muscular contractility unimpared, as chloroform? Ether and ethyl bromide have found favor with some practitioners, but neither can displace chloroform.

Fordyce Barker states in his writings: "I may say here that I have long regarded chloroform as the best and safest anæsthetic in obstetrics, and that since 1850 I have used no other."

The danger from the employment of chloroform in this department of medicine depends more upon the carelessness with which it is administered than to any toxic effect inherent in it. The four cardinal points to be borne in mind when giving this anæsthetic are: First, plenty of pure atmospheric air; second, liberation of a small amount of the vapor at a time; third, attention to the respiration; and, fourth, frequent observations as to the force and frequency of the cardiac action. That the recorded cases of death have been due in a great measure to saturation of the residual air in the lungs to a fatal degree can scarcely be doubted. A few deep, forced inspiratory efforts will quickly produce such a condition. Withdrawal of the agent under these circumstances cannot prevent the further entrance of the chloroform vapor into the circulation, for it already fills the air-cells. Nor will attempts at artificial respiration prove effectual, since but a small quantity of the residual air can be forced out of the lungs, while that which enters fails to sufficiently dilute the vapor owing to the tardiness of diffusion. Let us not suppose, however, that because we administer to the parturient female small amounts of the drug continuously, therefore no risk is incurred, for experiments directed to solve this important question go to prove that even small doses, when continuously inhaled, tend to produce dangerous, and at times fatal, cardiac exhaustion. Far different is the result when given intermittently, as is the unalterable rule in obstetrics. Should we seek authority for the statement that the dangers from the careful administration of chloroform in labor are too insignificant to warrant its refusal, we have only to turn to the *American System of Obstetrics* to find therein the following: "The danger when chloroform is used only to the extent of mitigating or abolishing pain in childbirth is practically *nil*." Lusk, quoting from Bert's experiments, states "that chloroform might be intermittently administered for an indefinite period with safety." These remarks do not apply to its use in

* Read before the Philadelphia County Medical Society, April 27, 1892.

the third stage of labor, for as is well known, after delivery of the child it is likely to occasion relaxation of the uterus, thus favoring post-partum hæmorrhage.

Offering the above as a preface to my remarks on the judiciousness of employing chloroform when the parturient female suffers from organic cardiac disease, it now remains for us to consider the effect of parturition upon this enfeebled circulatory organ, thereby securing a scientific basis for our conclusions. In the first stage of labor we find the muscular contractions confined to the uterine muscular layers and directed toward overcoming the circular fibres of the cervix, while in the second or propulsive stage not only does the uterus exert its power to the utmost, but also the abdominal and respiratory muscles are brought into action by the will of the parturient in her efforts to expel the fœtus. The diaphragm is forced down and its movements paralyzed by the female holding her breath.

The other respiratory muscles are likewise unable to act, and hence imperfect oxidization of the blood results. As a consequence, the cardiac movements are accelerated, greater resistance is met with in the pulmonary and aortic circulations. Moreover, a tendency exists to venous congestion, as evinced by the hue of her face and swollen veins.

Owing to the excruciating pain experienced when the head passes through the cervix, the parturient is further tempted to make additional muscular efforts, which only augment the difficulties met with. Under normal conditions this strain is of such brevity that it cannot be considered of any importance, but when complicated by disease of the heart it is of far greater gravity. If the condition be one of fatty degeneration due to a previous peri- or myocarditis, resulting in faulty nutrition and enfeeblement of the heart's action, as envinced by weak impulse, venous stasis, confused and irregular sounds, anæmia alike of brain and other organs, with faintness and oppression on the slightest exertion, this interference with circulation and respiration may readily tax its powers too far, and so cause speedy death from paralysis. Here the conditions which pertain in surgical anæsthesia are absent. The indications present are to allay excessive muscular action and respiratory spasm which is threatening the over-stimulated heart.

To allow the female to continue such efforts is to permit her to commit suicide; to warn her to desist is useless when in such agony; while delay is likely to be fatal. How can we overcome this condition of nervous excitement? Can we accomplish it by the administration of chloroform? Yes; of the two evils, for we must acknowledge there is an element of risk in giving choloform, we can only choose the lesser, and so promptly proceed by inhalation to relieve the accessory muscles of parturition of their strain. By the abolishment of pain we lessen the work required of the laboring heart, which, instead of beating at a rate of one hundred and forty or more a minute, may diminish in frequency to ninety or one hundred.

What has been said of fatty heart is equally applicable to conditions of hypertrophy and dilatation.

The equilibrium, if disturbed, is almost certain to result disastrously. That sense of fullness in chest and oppression due to bronchial congestion, if relief is not afforded becomes most distressing. The cyanosis from deficient aëration is greatly exaggerated, while the insufficient blood-supply to the brain causes syncope and may be succeeded by coma if the excessive reflex disturbance be not removed. Nor are the indications for the administration of chloroform materially different in the case of females in labor with valvular disease. Whether it be mitral in the young adult or aortic in the aged primipara the cardiac strain must be relieved if we would save our patient. As is well known, all forms of valvular disease ultimately develop a condition of ischæmia on one side with corresponding low tension, while on the other side is stasis with high tension. While by compensation life may run on for years, yet, when the strain of parturition comes, it will soon be overthrown if precautions are not taken to prevent it.

Of what benefit will be our knowledge of the value of cardiac "physiological rest," as laid down by Fothergill, if we do not apply it under these conditions? We all appreciate the importance of securing "quietude of mind and body" when such pathological states exist. Then why not employ the quickest and safest means to obtain it by the inhalation of chloroform? If the danger is great from "active exer-

cise—climbing mountains, running up stairs, lifting heavy bodies, and all kinds of exercise involving heart strain"—how much greater, aye, how immeasurably so must it be when the parturient female forces, with the anguish of despair, every muscle to its utmost in her desire to deliver her child. From a study of chloroform anæsthesia in obstetric practice we have seen how it should be administered and how it acts. Surely none will deny that in its employment under these circumstances we act otherwise than for the best interest and safety of our patient. That one may not be charged with being a blind adherent to theory, one has only to turn for support and justification to the teachings of the late lamented Fordyce Barker, who states: "It seems to be almost accepted as an axiom, with both profession and public, that the inhalation of chloroform is dangerous to any woman with disease of the heart. For more than thirty years I have been convinced that this opinion is quite erroneous, and I have so taught in my lectures and in former writings."

He goes on further to say: "I have seen several cases, complicated by dangerous heart lesions, which terminated favorably, as I think, solely from the use of chloroform."

Snow, likewise, is of this opinion, "In all forms of valvular disease," he says, "chloroform, when carefully administered, causes less disturbance of the heart and circulation than does severe pain." To quote from Championniére: "If," he says, "I recognized an organic affection of the heart, without pulmonary complications, I should rather give the woman chloroform than to let her suffer." Were further proof necessary as to the propriety of employing chloroform anæsthesia, one might include among this group of clinical observers, Vergeley, who expresses himself thus: "Diseases of the heart are not a contra-indication to the use of anæsthesia." Macdonald states: "In almost all cases of heart disease with labor chloroform has been given, and apparently with benefit, during delivery. If carefully administered I think it cannot but be useful in all cases." Since such eminent authorities advocate its employment can we justify ourselves in refusing our patients the benefit and comfort this agent affords? What is the danger from chloroform compared to the state of exhaustion and collapse into which the parturient female will inevitably fall? If this heart is forced to the verge of paralysis from overwork and excitement, why shall we not use the means at our command to lessen that strain? Let us have a reason for the faith that is in us, and not hesitate to fearlessly employ extreme measures to overcome extreme dangers.

Chloroform by inhalation can and will, if properly administered, save the lives of parturient females, suffering from organic disease, when death seems imminent from over-stimulation of its ganglia through reflex nervous action. Organic heart disease, then, does not preclude the use of chloroform in labor, but rather is a condition calling for its careful administration.

THE TREATMENT OF CYSTITIS BY CORROSIVE SUBLIMATE.

Guyon (*Bulletin Médical*, January, 1892,) reports the good results obtained from the use of corrosive sublimate, in the form of washings or better still by instillation, in the treatment of 26 cases of cystitis. Tubercular cystitis, which is only relieved by a general treatment, seems to receive marked benefit from the use of the bichloride of mercury. The cases of cystitis which are notably benefited by this drug however, are those occuring in prosfrom this ointment, and what was especially remarkable was the marked diminution tatic patients; in such cases the remedy ought not to be employed until the inflammation of the affected organ has subsided. When the capacity of an inflamed bladder is small, then the instillations are to be preferred, for, under these circumstances, the contact of the remedy with the mucous membrane is prolonged, and the injection allowed of larger doses. The solution employed should be, at the beginning, of the strength of 1 to 5,000, this being gradually increased to as high as 1 in 1,000. The instillation must be made on the posterior portion of the urethra, never injecting more than 20 or 30 drops at the beginning of the treatment. Later on 4 and even 8 grammes may be employed, if, however, pain is produced at the enset, the number of drops must be diminished. Before injecting the medicine the bladder should be emptied. The washings may be employed at the later stages of the affection, when there is absence of pain.

ERRORS OF REFRACTION AND THEIR RELATION TO HEADACHES AND OTHER REFLEX NEUROSES.*

By F. R. REYNOLDS, M. D.,
EAU CLAIRE, WIS.

This subject has been so often before the medical profession of late, that I feel I almost owe an apology for again bringing it to their notice. My only reason for so doing, is that I may emphasize its importance and impress the necessity of a thorough examination of the eyes when no other methods of treatment succeed in effecting a cure in obscure nervous troubles. By a thorough examination, I mean one in which the accommodatiou has been paralyzed by a mydriatic, so that the entire amount of refractive error, both manifest and latent, may be ascertained.

That there is often a wide difference between manifest refractive error, and the entire amount as brought about by the paralysis of the accommodation, I shall show by citing a number of cases from my own practice.

Very often in the young, there is not only no apparant error of refraction, but by a spasm of the accommodation, hypermetropic eyes often show an apparent myopic condition, and myopic eyes show an increased degree of myopia. Patients often come to us with the complaint that their eyes are weak and they think they require a little strengthening eye wash; when judicious questioning often develops the fact that they have been subject to headache, more or less, for a number of years, and the letters sometimes blur after continued reading. Such patients will scoff at the idea of requiring glasses, claiming they can see "as well and as far as anybody."

Although in childhood while the power of accommodation is still good, constant close work is possible to these cases, it grows more and more difficult as the range of accommodation diminishes with advancing age: or this condition may be brought on in children as a result of severe disease or after excessive ocular strain.

The power of accommodation may be maintained for a certain length of time, then it relaxes, the letters become indistinct, objects become confused, the eyes begin to smart and to burn, and if work is continued pain in the eyes and head result. The pains often assume a neuralgic form, but after their long continuance the headaches sometimes become independent in character and persist after the strain is removed. Treatment in such cases is of no avail until the ciliary irritation is relieved. It is not until then, that the remedies indicated produce their effect. The patient may not show any refractive error upon examination by means of the trial case; but by retinoscopy, or after the accommodation has been paralyzed by a mydriatic, a decided and sometimes very considerable degree of ametropia is discovered.

I have known cases to show no error of refraction at all, or only a slight degree, that by retinoscopy or after preparation by a mydriatic have shown as high as 2.50 to 3.00 D.

In a paper read by Dr. Dana, Prof. of Nervous Diseases in the New York Post Graduate Medical School, "On Chronic Headaches of Functional Origin," we find the following: "At the present time the eye is credited with giving rise to an immense number of head pains.

"Their location depends, not only upon the pathological condition of the eye, but also upon the constitution and occupation of the patient. From my investigations, it seems to me that the most general rule which one can formulate is that headaches of refractive errors are usually frontal or orbital, those from muscular insufficiencies are more often occipital and cervical."

And it is here pertinent to remark that Prof. Dana is not a specialist in Ophthalmology.

Meyers in his work on diseases of the eyes says: "Again, patients never fail to tell us that they do not see so well near at hand, as at a distance, and that their eyes get tired very easily when their work requires close application. This feeling of fatigue in the eyes is accompanied with pains in the peri-orbital region and sometimes with headache. This is a symptom which at once sets us on the track of the diagnosis."

*"In writing of Habit Chorea, de Schweinitz wishes to emphasize the fact that if the habit spasm especially affects the mus-

* *Read before the Inter County, Med. Society at New Richmond, Wis., March 8, 1892.

* An. of Univ. Med. Sci. 1889, B. 60.

cles of the face, particularly those around the eyes, the following points deserve attention:

1st. The condition of the refraction and the muscle balance should be carefully examined.

2nd. The anomaly of refraction under complete ciliary paralysis, and the full, not partial, correction ordered.

3rd. This correction should be employed in conjunction with proper internal medication and general hygiene and not to the exclusion of these measures."

* "Gould reports a case of chorea in a girl, that, without, amelioration, had been treated for two years in a hospital with large and long-continued doses of arsenic.

This treatment was discontinued upon ordering spectacles, and within three weeks after the correction of her compound hyperopic astigmatism the chorea entirely disappeared, (not returning in six months) and with it likewise her headache, dizziness, violent bursts of temper, etc.

† He also calls attention to the influence of errors of refraction upon developing character and vocation in life. The subtle influence of even slight eye-strain may in the young work deleteriously upon the disposition and the mental life, or slowly turn them from occupations otherwise chosen."

‡ Colburn gives the case of a minister, who, upon account of frequent epileptic seizures and mental disturbance associated, with inability for use of eyes, had, after eight years of suffering; an insufficiency of the external recti muscles treated by exercise with prisms, and an hereditary hypermetropic error of refraction carefully corrected with proper glasses.

From this time the patient gradually improved, until, at the date of the report, he had had no seizures for more than one year, and his mental condition had become so much better, that he was, to use his own language, "able to do a good day's work without any symptoms of his old trouble."

‖ Based upon twenty observations, George Martin, in an article entitled "Ophthalmic Migraine and Astigmatism," deduced the fact that bilateral migraine always is the greater on the same side as the stronger contraction of the ciliary muscles, and that relief is afforded by the use of the correcting lenses.

Six cases of migraine were met with in the practice of Percy Jenkins, five of which showed hypermetropia from one to two dioptries, and one, myopia of 2.25 D.

Correction of the refractive error was followed by absolute cure in every case."

* "Among sundry neuroses Harper reports the details of two cases of obscure but varied mental trouble due to hyperopic and astigmatic errors, that disappeared at once on their correction.

Hewetson cites illustrative cases of insomnia and general symptoms usually called hysteria, such as tenderness of the spine and skin generally, great nervousness, etc., that were distinctly traceable to irritional eye-strain. Gould describes a case of extreme rapidity in the cardiac action (130 beats per minute) that had resisted other therapeutic attempts for several months, (which had come on after prolonged reading at night,) and that was followed by loss of health, flesh, etc.

With a correction of the existing astigmatism, there was a speedy reinstatement of normal conditions."

The following were selected from my case-book as illustrative of some of the conditions mentioned in this paper:

Case I.—Miss. H. T., Stillwater, Minn. Consulted me Sept. 25, 1885. She came to me, her eyes filled with tears, and so overcome by her feelings that she was scarcely able to speak. She told me she was sure she was going blind, sooner or later, and that she was completely discouraged.

Her symptoms, in her own language, were as follows: "My eyes have always been weak, and I have been subject to sick-headache ever since I can remember. I often have to go to bed and lie the entire after noon the pain in my eyes and above them is so severe. At times, I get so dizzy as to nearly fall, and then everything gets black in front of me, and I think I am surely going blind; but usually, after a night's rest, the symptoms disappear, and I feel encouraged again, only to go through with the same pain and suffering, upon the slightest use of the eyes."

She said she had taken medicines for her headache ever since she could remember,

* An. of Univ. Med. Sci., 1890, B. 140.
† An. of Univ. Med. Sci.. 1889, B 32.
‡ An. of Univ. Med. Sci., 1889, B. 33.
‖ An. of Univ. Med. Sci., 1890, B. 140.

*An. of Univ. Med. Sci., 1889, B. 33.

but nothing ever produced any lasting benefit. I told her to take courage as I thought I could bring her out alright.

After a thorough paralysis of the accommodation, I found her refractive error to be as follows: viz—

R. E. +3.00 D.Sph. ⊂ +1.25 D. Cyl. Ax. 90°

L. E. +3.00 D. S. ⊂ +1.25 D. Cyl. Ax. 60°

I gave her full correction and advised her to wear her glasses constantly.

Under date of Feb. 23, 1892, she writes as follows: "As soon as I got my glasses from you my trouble began to subside, and in a short time I was entirely free from my headache and other unpleasant symptoms.

"I am very grateful to you, as I can now do any kind of work with my eyes, day or night, and am not troubled in the least.

"Could not possibly get along without my glasses, for at times, I have tried to do so, but cannot read more than a few minutes before my eyes commence to pain."

Case II.—Miss M. Z.. æt. 17, St. Paul, Minn. Called Sept. 17, '89. Strabismus, L. E. 21–2 lines. Subjective symptoms as follows:—Has pain in the head and eyes when used excessively. Pain commences in the eye-balls and shoots through the head. Has frequent attacks of nausea and dizziness.

Vision R. E. $\frac{20}{40}$ L. E. $\frac{1}{20}$ with +1.00 D. S ⊂ +

.25 D. Cyl. Ax. 180° for R. E. V= $\frac{20}{20}$

With +2.00 D. S. ⊂ +

.25 D. Cyl. Ax. 180° for L. E. V= $\frac{20}{20}$

Under mydriatic, refractive error discovered was as follows:—

+2.00 D. S. ⊂ + .25 D. Cyl. Ax. 180° both eyes.

Corrected strabismus and prescribed above combination with the result of entirely curing trouble.

Case III.—Miss M. C. Menomonie, Wis. Aet 18 years. Consulted me August 27th, 1885. Subjective symptoms:—Holds her book very close to eyes. Constant headache while studying. Complains of nervousness and insomnia. Vision, $\frac{20}{70}$ both eyes.

Before using mydriatic I found the following combination of hypermetropia and myopic astigmatism. R. E. +2.50 D. S. ⊂ —3.00 D. Cyl. Ax. 10°. L. E. +2.50 D. S. ⊂ +2.75 D. Cyl. Ax. 170°.

After using mydriatic, R. E.= + 5.00 D. S. ⊂ —3.50 D. Cyl. Ax. 10° L. E.= +5.00 S. ⊂ 3.50 Cyl. Ax. 170°.

These glasses entirely relieved patient of all headache, nervousness, and insomnia.

Case IV. Mrs. A. J. A., Rock Elm, Wis., æt 35 years, consulted me Jan. 20, 1890. Subjective symptoms given at the time read as follows:—Eyes often get dim while reading or sewing. Great pain in periorbital and frontal regions after continued use of eyes. Has frequent attacks of "blind headache." Vision: R. E. $\frac{20}{30}$+, L. E. $\frac{20}{30}$

Manifest hypermetropic astigmatism is as follows:

R. E. +.50 D. Cyl. Ax. 90°: L. E. + .75 D. Cyl. Ax. 90°.

With the above correction V. was $\frac{20}{20}$

After use of mydriatic a compound hypermetropic astigmatism was revealed.

R. E. +2.50 D. S. ⊂ +.50 D. Cyl. Ax. 90°.

L. E. +2.25 D. S. ⊂ +.75 D. Cyl. Ax. 90°.

Full correction was given with immediate relief, and after three weeks all pain and headache had disappeared.

Case V. Mrs. P. A. L., Spokane Falls, Wash., æt 50 years, consulted me August 26th, 1889. Subjective symptoms given as follows: Eyes been weak for 25 or 30 years. Has frequent attacks of nervous headache. Worn glasses 20 years, but never was fitted by an oculist, and never wore glasses for distant vision. V.=$\frac{20}{40}$

Without use of mydriatic, the following refractive error was discovered:

O. D. +1.75 S. ⊂ +.75 C. Ax. 70°.

O. S. +1.75 S. ⊂ ×.50 Ax. 160°.

With this correction V. was $\frac{20}{20}$

I prescribed biocal glasses with above combination for distant vision; and the addition of +2.75 S. for reading, with very happy result; as she writes me under date of Sept. 20th, 1891., that "she can use her eyes all day without pain or discomfort and she is entirely cured of her nervous headache."

Case VI. F. C., Crookston, Minn. Aged 8 years. Came to me Dec. 15th., 1888. Has had chorea two years, since first commencing to attend school. She is weak and anæmic, and complains of always being tired. First symptoms manifested were twitchings of the eyelids and face, which were soon succeeded by characteristic jerkings of the legs and arms, and at times inability to maintain her equilibrium in walking.

Added to these symptoms were severe

attacks of headache; periorbital and frontal. She was removed from school and treated with tonic remedies: iron, strychnia, arsenic, and finally by electricity with beneficial results, and apparent cure; but upon returning to her school work, the trouble would again manifest itself; and so continued until she came under my care. She was brought to me on account of "Blepharitis Marginalis" which had also existed for two or three years.

After obtaining a history of the case, an error of refraction immediately suggested itself.

Upon examination no manifest error was discovered, but after obtaining complete ciliary paralysis she showed;

R. E. +2.75 D. S. ⌒ +.50 D. Cyl. Ax. 70°.

L. E. +2.75 D. S. ⌒ +.50 D. Cyl. Ax. 160°.

I gave her full correction to be worn constantly; also gave ointment for application to edges of eyelids.

She began to improve almost immediately the nervous phenomena manifesting themselves less and less frequently until at the end of three months they had ceased altogether and have not since returned.

*Goode in an article on "Headaches due to Disorders of Vision" believes that the increase in the number of spectacles worn is not to be regarded as an evidence of modern degeneration of the eyes and threatened further alterations unless we call a halt in some of our ways but rather that a long-felt necessity has been met.

Although I fully agree with Goode in the above, in addition I feel called upon to say, that in my opinion, the present system of education, has a great deal to do with developing these various nervous and mental disorders. The too rapid advancement in the education of the young, and the habit of placing so much of the work upon the black-board, from which the pupil is required to recite and to copy: the blackboard work being to my mind especially pernicious.

*Annual of Univ. Med. Sciences, 1889, B. 33.

URTICARIA.

For the atrocious itching of this disease, Quinquaud prescribes the following lotion:

℞

Acid boric	grams	30
Chloral hydrat	"	5
Aq. dest	"	180 M.

TREATMENT OF HEMORRHOIDS BY CARBOLIC ACID INJECTIONS.*

By J. W. Hallum, M. D.

CARROLLTON, GA.

The treatment of hemorrhoids by carbolic acid injections, is a treatment that I hesitate to present and advocate before this association, not because of any of its defects, but on account of its opponents.

To Colles of Dublin has been accorded the honor of first treating piles hypodermically, in 1874. Dr. S. H. Sturgeon, of this country, claims that he reported cures by the carbolic acid injection in the *Medical Brief* for 1874. There was but little attention given the subject before Dr. W. P. Agnew, of San Francisco, reported his cures by the treatment in *The Toledo Medical and Surgical Journal* in 1877. In 1880 Dr. Blackwood, of Philadelphia, reports his cures by it in the *New York Medical Record*. Since that time there have been volumes written on this subject.

Therefore I do not expect to introduce anything entirely new, but I do hope that I may be able to interest some of you who have not been making satisfactory cures of this very common disease.

Why you have not I shall not attempt to explain, but describe my mode of procedure in a country practice, where the office is unhandy, and an operating table or chair unknown.

It is not necessary to be a specialist in order to be successful in the treatment of piles by this method. By it quacks have succeeded admirably and made inroads on our practice?

The cure of this disease is comparatively unknown by the average physician. Are we not too often neglecting the more common diseases for the more rare? Therefore, I have offered no apology for claiming your time and attention for a few minutes.

It is not the object of this paper to give definitions, symptoms and varieties of hemorrhoids. I know of no reason why I should discuss the pathological anatomy of pile tumors; for they are all alike amenable to this treatment, whether recent or of long standing, venous or arterial origin, blind or bleeding, external or internal.

*Read before the Georgia State Medical Association April 22d, 1892.,

Hemorrhoids are sometimes complicated with abscess, ulcer, fissure, fistulæ and prolapsed rectum.

The works of Kelsey, Allingham, Smith and others give all the discriminating points of diagnosis, and I would respectfully refer you to them for such information. It is absolutely necessary to make no mistake in diagnosis when we go to apply the carbolic acid treatment. Because I am satisfied it would be unsafe to inject a prolapsed rectum or other healthy tissue with carbolic acid.

Piles are uncommon in either sex before puberty, and I have never yet seen one in children. However, Mr. Bryant in his Surgery on page 533 speaks of a treatment and says it is alike beneficial to child and adult.

I know of no cause of hemorrhoids that would contra-indicate the use of carbolic acid treatment. Yet I would not urge this mode in all cases without regard to the patient's previous history. We are often applied to for treatment for piles when there is really no pile—nothing more than an irritated rectum, caused by straining, diarrhœa, a night's debauch or the presence of some foreign substance. Such cases will readily yield, generally, to hot water enemata administered two or three times daily.

There is another class of cases that I always advise to "wait for a more convenient season" to receive treatment. These are cases of pregnancy. The household syringe will render these also bearable until her term is passed, and then if her piles continue we should advise her to have them treated.

But in most cases that apply for relief it is unnecessary to delay, but proceed at once to make cure of the pile tumor. We do this by mixing together pure carbolic acid one part, and pure glycerine two parts, and enough morphine and tannic acid that ten drops of mixture will contain one quarter of a grain each. Let this be thoroughly dissolved before using it.

I will not describe all the positions in which a patient may be placed for this operation. It is so simple that it can be done in any position that will command a good view of the tumor.

The position that I have found to be probably the best is the one in which a toad assumes when in a sitting posture. In this position the patient will almost invariably pass out the tumors by an effort at straining down. However, if he should fail then by gently manipulating with the fingers the contraction of the anal sphincters will be overcome and allow the tumor to readily pass out. When operating in the office I use a table about 18 or 20 inches wide, 30 inches high, with a stool at one end. The patient steps on the stool with the knees and lies down on the table, the face downward, this is a splendid position for this operation. For obvious reasons we select the tumor highest up the rectum for first injection. We then insert the needle at right angle to the base of the tumor near its base, and let the deposits be made at different places by moving the needle as the process of injection takes place. Allow the needle to remain in position till the blood of the tumor is coagulated which will be accomplished in about half a minute. Then the tumor is reduced when possible, well greased, and the operation is complete for that time. There is more or less burning for a few minutes consequent upon the injection, after which in the course of five or six days the tumor begins to throb and ache from the swelling and also the death of the pile itself. This pain will continue generally from one to not over fifteen hours. The latter is in case of a large external irreducible tumor. In about three or four days the sloughing is complete leaving a granulating surface which heals rapidly. After the healing process is complete the next tumor may be treated in a similar way to the first and so on till all have been destroyed.

We prefer to inject the tumor while it is engorged, in which case the pain is not increased but actually diminished. I have never yet needed a speculum or any other instrument except the hypodermic syringe to do this operation successfully.

We will suggest that not over two or three small tumors be injected at a time, and not over one when it is very large, because of the swelling consequent from the operation. Patients seldom suffer more than they do at any other time from a fit or paroxysm of the piles.

We would advise our patients not to indulge in any physical exercise that requires much effort, but ordinarily they are able to be up and do light work all the while.

Nothing more than a gentle laxative should ever be used for the bowels.

For the last ten years this plan of treat-

ment has never produced any alarming symptoms—no secondary hæmorrhage and sloughing except the pile itself. By it I have yet to report my first failure. By this mode Drs. E. J. Dennis of Kansas City, Fred R. Boyd of St. Joseph, Mo., Q. A. Shufford of Tyler, Texas, W. L. Rodman of the University of Ky., have cured their hundreds. While W. P. Agnew of San Francisco, Ivies and Davis of Chicago, Kelley of Cincinnati, Monroe of Louisville, E. F. Hoyt of New York, have cured their thousands.

BORATE OF SODIUM IN THE TREATMENT OF EPILEPSY.

According to Mairet (*Le Progrés Médical*, February 6, 1892) the use of borate of sodium demands on the part of the therapeutist, certain precautions. The physiological action of borax is so pronounced, that in certain cases it becomes necessary to suspend it, notwithstanding the good results to be obtained from its use. The remedy exercises its action upon digestion, nutrition, and the skin. On the digestive tract it produces such phenomena as nausea, salivation, a considerable loss of appetite, a dislike for food, and sometimes vomiting and diarrhœa. Upon nutrition it sometimes causes a slight diminution of the bodily weight; but in some cases the emaciation is quite marked, and may be accompanied with swelling of the face, œdema of the extremities, and diarrhœa, giving rise to the production of a true alkaline cachexia. Between these two extremes, the whole range of the disorders of nutrition may be observed. Under the skin, borax produces various eruptions, notably the papular, the eczematous, the scarlatinous, the rubeolic and the furuncular. In administering the drug small doses must be employed at first, that is from 0.50 grammes to 1 gramme, which may be increased gradually, according to the tolerance of the digestive tract. When 8 grammes are insufficient to completely arrest the attacks, it may be concluded that larger quantities are of no advantage. In a general way, with the exception of certain cases, the maximum dose of borax, from which good results may be expected, may be set down as 10 grammes during the 24 hours. When the beneficial limit of the action of the drug has been reached, the doses employed should be diminished.

SOCIETY REPORTS.

CLINICAL SOCIETY OF LOUISVILLE.

Stated Meeting, April 5th, 1892.

P. Guntermann, M. D., President, in the Chair.

RECURRENT PERITONITIS.

Dr. W. H. Wathen:—Referring to the case of recurrent peritonitis reported by Dr. L. S. McMurtry at a previous meeting, it has been my experience that frequently in these cases, there are severe pains in one or both legs; and, I have often had cases where the nutrition of both limbs was much impaired, with cold clammy perspiration, where but one side of the adnexa was involved. But, generally, these disturbances occur in the leg on the side where the tube or ovary is diseased, and they are various, probably sometimes with symptoms of histroneurosis, which will explain the drawing up of the leg in the case reported. These troubles often occur where there is nothing more than simple adhesions which are easily separated, as in the case described, with no pus or hard exudate. There is no way of curing these cases except by surgical interference, and the results are very gratifying. In the case reported the operation was not entirely complete, because nothing was done to prevent the uterus returning to its retro-placed position. It is the safer plan to get permanent results, to fasten the uterus in front by some of the methods devised for that purpose. Formerly to accomplish this, I have used a silver wire, which I do not intend to use again; I will substitute kangaroo tendon and fasten the round ligament and broad ligament to the parietal peritoneum on each side of the abdominal incision. This is the safest and quickest method, and, there is no trouble resulting from it. You might probably do a more artistic operation by suturing the broad ligament and round ligament to the anterior surface of the uterus, thereby shortening these supporters so as to hold the uterus in its proper position. It is bad surgery to attempt to separate the adhesions and replace a retroposed uterus without doing an abdominal section. It does no good and it may do much harm, or cause the death of the patient. There

may be small cavities of pus in the pelvis that no laparotomist is able to diagnosticate until the abdomen is opened, which forcible efforts at replacement might rupture and kill the woman. Adhesions cannot be separated by this method, and a laparotomy will finally have to be performed. I have dilated the womb frequently, and my name is very widely known in this connection, because of an instrument I devised some years ago for this purpose, and which is now manufactured and used in this country and Europe. I have never caused peritonitis by dilatation, but have learned that peritonitis often follows dilatation in the practice of some physicians, even when dilatation is not carried to any considerable extent. I have under treatment a patient with a pus cavity emptying into the rectum, caused by dilatation of the cervix by one of our prominent physicians. I do not think that dilatation of the womb, either extensive or moderate is justified if there are any adhesions.

PELVIC REFLEX TROUBLES.

I will report a case I operated upon about four or five weeks ago, with unusual reflex troubles. Her physician had been giving her three-quarters of a grain of morphia and one-fiftieth grain of atropia three or four times a day hypodermatically. She would get nervous and her pulse would increase in frequency and gradually run up from 80 to 140 per minute; her face would get as red as the blush of scarlet fever; around her neck the skin would be perfectly white; on her arms and body there would be spots two or three inches in diameter, the color of the face, and separating them the skin would be absolutely bleached. In other words, on parts of the surface of the body, there was paralysis of the capillaries, with capillary contraction in the intervening spaces. This would last from two to five hours, coming on sometimes twice daily. I removed an embedded broad ligament cyst, and separated extensive tough adhesions. There was considerable bleeding and a drainage tube was used for two days. She had no outward symptoms from the operation, her pulse and temperature remaining normal. After the operation there was no recurrence of these blushes, until two weeks ago when a friend slipped and fell, striking with her arms upon the abdomen of the patient. The shock caused severe pain and the morphia, which had been reduced to about one-eighth of a grain per day, has since been increased to from one-quarter to one-half grain daily; her reflex disturbances have returned, but her pulse has not gone above 115 per minute. It may be necessary to do another laparotomy and remove the ovaries and tubes, which were separated from adhesions and not removed, because not badly diseased.

SYPHILIS.

Dr. J. W. Irwin: I bring before you to-night a patient that does not look at all sick, as you will observe. This gentleman fifteen years ago had a small sore on his penis, which was diagnosticated by the physician who attended him at the time, as a soft chancre, which healed up rapidly. He first came under my observation on the 8th day of August, 1890. He was then suffering from pharyngitis, with induration of the soft palate. There were no evidences of constitutional disturbance, no enlarged glands and no eruption of the skin. The throat was not ulcerated, but from its appearance and the indurated condition of the soft palate, I gave the opinion that the trouble was syphilitic, which opinion was not concurred in by the patient. He remained under my treatment until about the 19th of November, 1890, when the throat trouble had yielded to specific medication, and, then, passed from under my observation until early in the spring of 1891. During the interim from the time I saw him, until he returned, he had a series of experiences, which he can tell for himself. Soon after his return I was called to see him and found him suffering from partial hemiplegia, and severe hemicrania. I made a further examination and found that he had nodes on the clavicle and sternum, and there were evidences of similar deposits within the skull; vision was imperfect; a supra-trochlear gland had suppurated. He had gained in flesh and in strength under the treatment I had given him, still, he was not satisfied and sought advice elsewhere. His sight grew worse, and as it did not improve under the treatment he received here, he went to Chicago and there consulted an ophthalmologist who told him that he would never again regain his sight; he was now entirely blind and had to be led. He then went to

Milwaukee and sought the advice of a prominent specialist, who told him that he thought he had about one chance in a thousand of regaining his sight, but, he would not undertake the case unless he could remain with him a year. Very much discouraged and blind he then returned to Chicago and put himself under the care of another physician who concurred in the diagnosis that I had made, and prescribed similar remedies. He came under my care again on the 29th of December, 1891. I found him taking 125 drops of a saturated solution of iodide of potassium three times a day, and his sight had improved enough to enable him to find his way without assistance. I advised that the dose be increased to 150 drops and the improvement continued much more rapidly. As the dose was well borne, soon after I advised that it be increased to 180 drops. Meantime he had gained in weight under these enormous doses from 180 pounds when he commenced the treatment to 267 pounds. One eye is now so far improved that he can see to read, and he can see his hand when passed before the blind eye.

The peculiarity of this case was in the difficulty of diagnosis at first. The induration of the soft palate which would not yield to treatment, led me to believe it was a case of syphilis, notwithstanding the fact that there was nothing in the history indicating that he had contracted the disease. Then, when the supra-trochlear gland became inflamed, I was more than ever convinced that it was syphilis. Finally the appearance of nodes and trouble with his eyes, pointed unmistakably toward syphilis.

Dr. W. O. Roberts:—What effect did the iodide of potassium have upon the kidneys? Did it increase the flow of urine?

Dr. J. W. Irwin:—Did not notice any change. He is taking now 180 drops three times a day. The stomach seems to stand the dose very well.

Dr. W. O. Roberts:—This shows that large doses of iodide of potassium can be given in these cases. There are several members present who are well acquainted with a patient, but not with the treatment, that I will mention in connection with the case reported. It was a young man who had syphilis, and had every evidence of involvment of the brain. He was treated by Dr. Bodine and myself, and we gradually increased the dose of iodide of potassium as done in the case related by Dr. Irwin, until the patient took one half ounce (240 grains) three times a day. We noticed after giving these large doses it produced most copious diuresis, the patient passing enormous quantities of urine. His symptoms yielded to the treatment, then the dose was was gradually diminished. I do not remember for what length of time the enormous doses were continued, but for a long time. It has now been fifteen or sixteen years, and there has been no evidence of syphilis since then.

Dr. T. Satterwhite: I have often spoken of the case referred to by Dr. Roberts as the criterion for large doses of iodide of potassium. Dr. Pusey and myself had a case several months ago, in which there was cloudiness of the cornea, and total loss of sight of one eye. It never yielded to any treatment except enormous doses of iodide of potassium—he took about 200 grains a day and has improved ever since. His restoration to sight is progressing, he is now able to tell the number of fingers you hold up. I believe in large doses of iodide of potassium in syphilitic diseases.

Dr. J. A. Ouchterlony: I was very much interested in the case, especially because of the obscurity of the diagnosis. We all know especially in cases of syphilis, where there are early symptoms, we may expect various secondary troubles later on. While toleration of large doses of iodide of potassium may be evidence that it is a syphilitic trouble, still, I do not think the opposite will hold good. One does meet occasionally with syphilitic patients who cannot tolerate iodide of potassium; these are exceedingly troublesome cases. I have one of that kind under my care at the present time. In it there is a history of syphilis, with very marked early secondary symptoms, and three years later very extensive glandular enlargements, sufficiently characteristic of Hodgkin's disease to make it a little doubtful whether the patient did not have that. The blood was examined, however, and found to be perfectly normal with the exception of a slight diminution of hæmoglobine. In this case which was undoubtedly syphilitic, doses of sixteen grains of iodide of potassium three times a day gave rise to such unpleasant effects, that it was necessary to diminish the dose. I believe in this case a sojourn at Hot Springs would do good. Possibly we could get beneficial results by carrying out a

"Hot Springs'" treatment as well as practicable at home; for instance, large doses of silurian water, and making him take a Turkish bath three or four times a week. Under such circumstances, I think we could make persons who are intolerant of full doses of iodide of potassium take large doses, when, ordinarily they would not be able to do so.

Dr. W.O. Roberts: Have you ever used digitalis in connection with the treatment of syphilitic cases?

Dr. J. A. Ouchterlony: Never, unless there were some evidences of cardiac disturbance with it.

Dr. A. M. Vance: I am surprised that Dr. Irwin did not say anything about giving his patient mercury. I do not believe that the tolerance of large doses of iodide of potassium is proof of syphilitic condition. I have seen a number of cases like the one Dr. Irwin described, that have responded after long treatment with iodide much better when mercury was added.

Dr. W. C. Dugan: I have read of a number of cases of syphilitic nature where calomel was used with very gratifying results.

Dr. W. Cheatham: I understand that mercury can be given by the skin with beneficial results, in cases of syphilis, where patients are unable to take it by the stomach.

Dr. J. W. Irwin: I hardly thought it necessary to go into details concerning the treatment of this case, but remarks would indicate that something on this subject may be said. When this gentleman came under my observation with pharyngitis, I could get no history of syphilis, and when I approached the subject, he denied having had anything of the kind, even the sore. I informed him that I thought he had syphilis, and there was no doubt in my mind that the condition of his throat was syphilitic. The throat trouble would yield to no treatment until I commenced the use of mercury. I gave him mercury by the mouth with very little effect. I then used the method of Lewin and gave injections of one-sixth grain corrosive sublimate hypodermatically, which caused the induration to melt away like snow. I continued this treatment every second day until he had received sixteen hypodermatic injections of one-sixth grain corrosive sublimate. I might say that the corrosive sublimate produced a very decided effect upon him; it caused vertigo to the extent that he would have to lie down for about half an hour after each injection. Then his skin would become a healthy pink color and normal feelings would return to him. Now, one word in regard to the use of iodide of potassium: I have never treated a case of constitutional syphilis depending upon iodide of potassium alone with the hope that the patient would remain permanently well. There is but one thing, in my opinion, that will cure syphilis, permanently, and that is mercury. Under the use of mercury combined with iodide of potash, or, given alone, I think we may expect the most beneficial results.

Diverticulum of Œsophagus.

Dr. J. A. Ouchterlony:—At a meeting of the Society some time ago, a case of intestinal diverticulum was presented, which interested me, and, in looking over some of my foreign journals, in connection with this subject, I came across a case that I shall be glad to read. It is a case of diverticulum œsophagus:

"Mattie B., aged forty-one years: She was admitted to the Seraphim Hospital, Stockholm, on the 24th day of July, 1890. Father died at the age of about fifty years of inflammation of the lungs, her mother died about the same age of consumption. Three brothers and sisters still living, of these two are in good health, one suffering from rheumatism. Four have died during infancy. One sister died at nineteen years of age in parturition. The patient has been married twice, her first husband died four years ago of consumption after suffering many years, and, in this way, causing her a great deal of care and trouble. She has had three children of which the first is still living and in good health, two died about three years of age. During childhood the patient had whooping cough, measles, diphtheria, and at the age of twenty she had a severe attack of typhoid fever, and somewhat later an attack of muscular and articular rheumatism. At times she had been suffering from a cough, but has never had any more serious chest trouble. No disturbances of the digestive organs have been observed. Menstruation has been regular but somewhat abundant. Four years ago she was admitted to the hospital on account of internal hæmorrhage. Her last pregnancy occurred thirteen years ago. The hygienic surroundings under

which she lived were right good, save that during the last winter she occupied a somewhat damp dwelling. Since about six years ago she suffered from time to time with palpitation of the heart, which occurred in paroxysms without any previous exertion or well developed cause. In May, 1890, she began to cough, expectoration was abundant and rather thin, without any mixture of blood; simultaneously she began to have a cardiac uneasiness. and there was also burning sensation in the left scapular region. By midsummer, on account of further severe cough and debility, she was compelled to take to her bed, which she has never left since then. She now began to suffer from a sense of oppression in the throat as if about to suffocate, by a spasmodic contraction of the muscles of the neck. She suffered from constant dryness of the mouth and throat, but there was no difficulty in deglutition, and no swelling of the neck was observed while at her home. Her strength diminished and she seems to have become considerably emaciated. Cough continued the whole of this time, which was rather harsh and barking, without any real hoarseness, nor was there any considerable dyspnœa. At the time of admission to the hospital, the patient complained of great fatigue, and difficulty in expectoration, with sense of suffocation and constriction in the neck. Cough very severe, occuring in longer or shorter paroxysms, during, which respiration was quite difficult. There was constant sensation of dryness of the mouth and throat, and, besides this she complained of pain in the right arm, and also, pain here and there in the muscles of chest. The patient meantime in bed showed a preference for position on the right side, or on the back, nutrition was bad, countenance pale, sleep disturbed by cough, appetite poor, bowels sluggish, no tremor, pulse eighty to the minute, regular and full, urine normal, temperature afebrile. Her voice was not markedly hoarse, no difficulty in deglutition, expectoration abundant, amounting to about four cuspidors per twenty-four hours." (These cuspidors, are little cups, kept for the convenience of the patient in bed.) "It consisted of a colorless, watery, frothy fluid, which contained a considerable quantity of mucous, but no yellow elastic fibres or tubercular bacilla. In the lower part of the neck appears a swelling of half the thyroid gland, the right lobe being larger than left. In the right supraclavicular fossa, there are some large infiltrated glands; in the left supra-clavicular fossa, there are a number of smaller similar glands, one of them somewhat tender under pressure. Upon laryngoscopic examination it was found that the right vocal cord was immobile during intonation, abduction movement during inspiration absent; the left vocal cord was perfectly mobile. Over both lungs were hard moist râles and ronchi, no dullness anywhere. Nothing abnormal noticed in regard to the heart, or of the abdominal organs. On the 9th of August, the dffiiculty in respiration had recently increased. When a laryngoscopic examination was about to be made to-day, the patient was seized with alarming dyspnoea that tracheotomy seemed imperative, and on which account she was transferred to the surgical ward, where this operation was immediately performed. No marked improvement in regard to the dyspnoea was effected by the operation. Twenty-third of August, to-day she was returned to the medical section. Twenty-ninth of August, the canula was removed and respiration performed quite well without it. Thirty-first of August—during the past night the patient was suddenly seized with a severe attack of dyspnœa, blood poured abundantly from her mouth; she endeavored, herself, to open the wound in the trachea; when the physician arrived the canula was inserted, but she died almost immediately.

"The autopsy demonstrated as follows: It took place on the first of September, 1890—After opening the pharynx and œsophagus, the mucous membrane was found to be the seat of a tumor which rose to the height of between three and five millimetres, and extended from a level with the larynx down about seven centimetres; it surrounded the whole pharynx in an annular manner, becoming narrow upwards and toward the lower end, leaving the posterior wall and downwards over portion of the anterior wall, free. The surface of this neoplasm is of peculiar formation, consisting of small nodules, these nodules are of greenish white color, and very firm to the touch. On a level with the lower portion ofi the neoplasm was found on the right lateral aspect of the œsophagus, an opening, which was about the size of the little finger, with rather

smooth, grayish red margins, which orifice opened into an elongated, perfectly incapsulated excavation, filled with dark, dirty, reddish colored fluid contents. This measured in length about seven centimetres, and in width between four and five centimetres. Its walls throughout its whole extent covered with numerous closely adjoining small nodules, which are most variable in appearance, roundish, elongated, periform, club-shaped, etc. Some of them quite slender, others project into the excavation having the the form of polypi, hanging by one or more quite slender stalks. These excrescences are of light, grayish red color, and quite firm. The walls including these excrescences have a thickness varying from three to nine millimetres where this sack-like formation projects between the œsophagus and trachea, and to the right of them. It is situated behind the sheath of the vessels and reaches upward to the middle portion of the thyroid gland, both lobes of which are somewhat hypertrophied. In the upper anterior portion is a rupture about eight millimetres in diameter through which it communicates with the trachea. In the lower part it is adherent to the apex of the right lung, over a surface, I suppose, about the size of a five cent piece. Upon incision into the lung this formation is well defined and distinct from the adjoining parenchyma which in the immediate vicinity appears somewhat firm and indurated. As regards the changes in other organs, nothing need be mentioned, save that the trachea and bronchia were filled with a dirty, reddish fluid like that in the cavity just described, and in both lungs was found numerous small recent hæmorrhagic foci, without any indication of the inflammatory irritation apparent in the surrounding area. Microscopical examination shows that both the tumor in the pharynx and the excrescences in the above described saculated formation, had the structure of chancroid. It is very certain that the excavation communicating with the œsophagus and trachea is to be regarded as a pre-existing diverticulum of the œsophagus, which had become the seat of chanchroid formation.

"According to Zenker and Zeimssen the present case should be designated as a pulsion diverticulum, which is of considerable interest, because of the secondary changes which have arisen by neoplastic formation in the mucous membrane lining it, and also on account of its unusual situation in the anterior portion of the right lateral wall of the œsophagus. Usually pulsion diverticulum are situated in the posterior wall between the pharynx and the œsophagus. The very considerable dyspnœa which had more and more developed during the patient's stay in the hospital, and which led to the performance of tracheotomy, was not satisfactorily explained by the paralysis of the right vocal cord, and, as no material improvement was obtained by means of the operation, it was quite apparent that some other respiratory difficulty must have existed. The case is one in which we have to look to the pressure upon the trachea by the enlarged thyroid gland, but this was very moderate. The pathological processes in the œsophagus which were present did not give any well marked symptoms during life. The patient never complained of difficulty in swallowing, and there never was any evacuation of the diverticulum contents by the mouth, the œsophagus was not sounded, as there was no inducement to adopt this procedure, and, possibly, such a manipulation might have hastened the final catastrophe—the rupture of the diverticulum into the trachea."

I have never seen a case at all like this; have never seen a case of diverticulum of the œsophagus, but, upon general pathological grounds, I am not surprised that when such a formation takes place, it should become later on the seat of a malignant growth, a tendency to the development of malignant formations in a number of analogous conditions, is quite common. I remember that a number of years ago, I saw a patient who had an incarcerated testicle in the inguinal canal; the testicle had never descended, and, upon working up the subject I found that a German surgeon in Breslau had collected a large number of such cases, and found a large proportion of them had terminated in malignant growth. Under certain circumstances morbid conditions involving chronic irritation, are likely to develop malignant disease. A very good illustration of this, is the tendency to development of malignant diseases of the liver in connection with the protracted irritation from gall stones.

PNEUMONIA.

I have to report two cases of pneumonia in which the most remarkable feature was

the mode of death: I saw the first one in consultation, probably in 1874, it was a case of right-sided pneumonia, the patient getting along remarkably well until the fourth day: He was propped up in bed, and was in the act of eating some oyster soup, when all of a sudden he tumbled over, dead.

The second case was a female patient, who, several years ago, had presented symptoms of tuberculosis, which had become latent. She was seized with symptoms of croupous pneumonia and by the eighth day the temperature had gone down to 99. At one time evidence of commencing resolution had been observed in the way of returning moist râles. These disappeared, very well marked bronchial breathing with marked dullness returned. The patient seemed to be in a fair way of recovery, the only unpleasant feature was, that while fever had gone down, there was no indication of incipient or even approaching resolution.

On the eighth day she was sitting up slightly, and wanted to drink some lemonade, when all of a sudden she fell back, dead. I think both of these were cases of heart clots. It is not likely that there was sudden cardiac paralysis, because there was no evidence in either case of great cardiac asthenia; the appearance was good in both the man and in the woman, there was not great rapidity of the pulse, in fact, there was nothing to indicate danger in that direction, other than that which is always present in every case of croupous pneumonia. It is a rare termination of this disease, and I think, it is a danger that we ought always to have before our eyes in the treatment of such cases. The occurrence of heart clots is due, first, to the well known excessive hyperinosis that is always present in this disease; secondly, to the over-action of the heart, which naturally leads to cardiac fatigue, if nothing more.

ELIXIR OF COCAINE.

Prof. Huchard, of Paris (*Le Bulletin médicale*, No. 1, 1892), employs, in the treatment of painful dyspepsia, gastralgia and vomiting the following elixir of cocaine:

℞ Muriate of cocaine.....grs. xv.
Hydrochloric acid.....f ʒ j¼.
Elixir de garus.....f ʒ xvj.
Distilled water .....f ʒ iijss.
A small wineglassful after each meal.

SELECTED FORMULÆ.

ASAFŒTIDA IN HABITUAL ABORTION.

Dr. Negri, of Venice, Italy, besides his cases formerly reported where he successfully used asafœtida in habitual abortion (*Centralbl. f. Gynækologie*, 22, 1887), has recently employed it in three more cases with good results. The remedy has also been given by Laferla and Cazanne with similar results.—*Centralbl. f. Gynækologie*, 39, 1890.—*Norsk Magazin for Laegevidenskaben*, 11, 1890.

CATARRH SNUFF.

℞ Finely powdered cubebs .....ʒj.
" " borax .....ʒiij.
" " camphor.....ʒiij.
" " alum.....ʒij.
" " soap bark.....grs. vj.—M.

INCONTINENCE OF URINE.

℞ Tinct. nucis vomicæ.....f ʒvj.
Ext. damianæ fl.....f ʒijss.
Glycerini.....q. s. ad f ʒiv.—M.
S.—ʒ j three times a day, after meals, in a wineglassful of water.

AN ANTI-NEURALGIC MIXTURE.

Dr. Hightoner employs the following:

℞ Bromide of ammonium,
Salicylate of sodium.....āā grams 5.
Tinct. hyoscyamus..... " 8.
Water..... " 80.
Syrup..... " 30.
A teaspoonful every thirty minutes until the pain disappears, without exceeding four teaspoonfuls.

—*Lo Sperimentale*, No. 1, 1892.

PERMANGANATE OF POTASSIUM IN DIPHTHERIA.

Dr. Netzetzky says that his twenty-two years' practice convinced him that the best treatment of faucial diphtheria consists in an energetic use of permanganate of potassium.

The drug should be administered in the shape of paintings and gargle. The following strong solution should be employed:

℞ Potassii permanganatis.....ʒ j
Aquæ destillatæ.....f ʒ j
M. Sig.—To paint the affected surface every three hours.

For gargling, which is to be repeated as often, a teaspoonful of the same solution should be mixed with a tumblerful of boiled water.

In those cases in which the child is unable to gargle, the following mixture should be given internally:

℞ Solutionis hydrogenis superoxydati, two per cent.....f ʒ ij.
Glycerinæ.....f ʒ ij.
M. Sig.—A teaspoonful every two hours.

— *Medical Record.*

COMEDONES.

Blondel's formula is as follows:

℞ Magister bismuth.,
Acid. boric. pulv.....āā grams 3.
Rad. ratanh. pulv.....gram 1.
Tragacanth... .....grams 2.
M. A dusting powder.

—*Deutche Med. Zeitung.*

PAINFUL MENORRHAGIA.

The following is recommended in menorrhagia with pain:

℞ Tinct. hydrast. canad.....f ʒ j.
Extr. hydrast. canad. fl .....f ʒ iv.
Sig.—Twenty drops three times a day.

—*Il Raccoglitore Medico*, 11, 1890.

A FORMULA FOR SYCOSIS.

Dr. Rosenthal (*La Semaine médicale*, No. 11, 1892) speaks highly of the following salve in the treatment of sycosis:

℞ Tannin.....grams 2.
Lactate of soda.....grams 5.
Oxide of zinc } .....
Powd. starch } .....āā grams 15.
Vaseline.....grams 40.

Apply this salve twice a day upon the previously well-shaved parts.

ACUTE ANGINA.

℞ Sodium benzoate.....gr. x.
Tincture of benzoin.....f ʒ ss.
Infusion of rose leaves.....f ʒ ss.
M. Sig.—Use frequently as a gargle.

—*L'Abeille Méd.*

TRAUMATIC TETANUS.

Dr. Mayer, of Amberg, reports a cure from the use of a mixture containing in each dose:

℞ Muriate of morphine..... 1-65 grain.
Chloral hydrate.....1½ grains.
Bromide of sodium.....2¼ "
Sig.—To be taken three to six times a day. Fifteen grains of morphine were taken in all.

HÆMOPTYSIS.

L'Union Médicale states that Bamberger recommends the following prescription in cases of hæmoptysis:

℞ Powdered alum.....gr. xxx.
Hydrochlorate of morphine.....gr. ½.
Powdered white sugar.....ʒ i.
Make into six powders, and give all of them in divided doses, in the space of three or four hours, in case of profuse hæmoptysis with cough.

Keep the patient absolutely quiet, and apply mustard-plasters and external heat to the extremities.

FOR OTORRHEA.

℞ Acid. boric.....ʒijss.
Glycerini } .....
Aquæ } .....āā fʒj.—M.
S.—Instil a quantity sufficient to fill the auditory canal three or four times daily.

TREATMENT OF DIPHTHERIA.

Gaucher (*Gaz. des Hôpitaux*, 1891, No. 122) recommends the local application of the following formula in the treatment of diphtheria:

℞ Acid. tartaric.....gr. xxiv.
Acid. carbolic.....ʒij.
Spts. vini rect.....fʒiv.
Olei ricini.....fʒvj.
Camphoræ.....ʒj.—M.

The membrane upon the affected surfaces is first gently removed. The application is then carefully made. After an interval of ten minutes, the parts are generously irrigated with boiled water, or a 1 or 2 per cent. solution of carbolic acid. If symptoms of laryngeal obstruction arise, a 2 per cent. solution of carbolic acid is constantly vaporized in the sick-room.—*Centralbl. für die gesammte Therap.*, x, 3, p. 172.

TREATMENT OF LUPUS ERYTHEMATOSUS OF THE FACE AND EYELIDS.

Dr. Brocq (*Le Bulletin médical*, No. 17, 1892) advises the application of the following salve:

℞ Salicylic acid.....dgms. 5.
Lactic acid ..... " 5.
Resorcin..... " 7.5.
Oxide of zinc.....grms. 2.
Pure vaseline..... " 17.

Pyrogallic acid is a topical application of great service in the treatment of lupus erythematosus. It has been employed in the most different manners. He uses the following:

℞ Salicylic acid.....gram. 1.
Pyrogallic acid.....grams. 2.
Pure vaseline..... " 20.

This salve is applied at night, and is well tolerated; during the day one may use the resorcin salve.

SUBSTITUTE FOR MUCILAGE OF ACACIA.

The following mixture was recommended by Mr. H. D. Sykes, at the last meeting of the Wisconsin Pharmaceutical Association, as a substitute for mucilage of acacia for technical purposes:

℞ Dextrin, white.....6 ounces.
Acetic Acid, dilute.....1 ounce.
Oil of cloves.....10 drops.
Glycerin.....1 ounce.
Water.....to make 16 ounces.

Mix the dextrin thoroughly with 6 ounces of cold water, add 8 ounces of boiling water, boil five minutes, stirring constantly; add hot water sufficient to make 14 ounces. When it is cold, add the acetic acid, oil of cloves, and glycerin. The oil must be thoroughly mixed with the remainder.

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LEADING ARTICLES.

THE MANUAL TREATMENT OF NOCTURNAL ENURESIS.

Nocturnal enuresis, or bed-wetting, is one of the most frequent troubles met with in young children. Not only in sickly, delicate, rachitic and scrofulous children, but those which are in vigorous health suffer from this weakness. Unfortunately the treatment of this most annoying ailment is far from always being crowned with success. Various drugs have been used for the purpose and occasionally internal medication is productive of good results, nux vomica and belladonna being the foremost among the drugs thus used, although recently the spiced tincture of rhubarb has been employed with decided success. Then again the local treatment with the Faradic current has not infrequently given still better results.

However, neither one treatment nor the other seems productive of permanent good. It is for this reason that the mechanical treatment of nocturnal enuresis, as suggested by Dr. Julius Csillag, will be welcomed by the profession, both for its comparative simplicity and its asserted efficacy.

Csillag takes the same view of this affection as Ultzmann, viz., that it is caused by a lack of innervation and weakness of the sphincter of the bladder. The cases which Csallig has successfully treated with this mechanical method included many which had resisted all other treatment, both internal and local.

The method was originally suggested by Thure Brandt—whose contributions in the field of massage are so well known—and Csillag has slightly modified it. Briefly described it as follows:

1. The patient is placed in the lithotomy position, and the physician introduces his right forefinger into the rectum, and seeks the urethra below the symphysis. Then following its course in the direction of the neck of the bladder, presses the urethra

against the bone and executes a slight vibrating pressure with the finger. This is repeated five or six times. In the meanwhile the fingers of the left hand press externally in the direction of the internal finger and simultaneously execute this vibratory pressure. This act which, as has been said, is repeated five or six times is designated by Csillag as pressure of the vesical sphincter. That the bladder should be emptied previous to this part of the treatment is obvious.

2. The patient is kept in the same position, and the physician, holding his hand parallel with the axis of the body, presses deeply into the pelvis with the finger tips and again executes a vibratory pressure. This is repeated twice or thrice, and is called by Brandt a pressure of the hypogastric plexus.

3. The patient is laid upon the back with the limbs outstretched and lying parallel to each other. The physician then grasps the patient by the ankles and pulls them apart, encouraging the patient, meanwhile, to endeavor to resist his movements. Now the patient brings his legs together, the physician resisting the movement.

4. The patient is again placed in the lithotomy position, but with his knees together. The physician stands at the side of the patient and presses the knees apart, the patient meanwhile offering resistance. Then the patient brings his knees together while the physician offers resistance. By means of these last two exercises the adductors and abductors of the thigh and the recti abdominalis muscles are brought into play, but simultaneously also the muscles of the floor of the pelvis are exercised. The anal sphincter contracts forcibly, and with it the vesical sphincter, owing to the synergism of the two muscles.

5. The patient stands, bending slightly forward, and resting his hands against a table crosses his legs, and then upon command of the physician, contracts the anal sphincter as though he were endeavoring to restrain a movement of the bowels. This exercise which can be intrusted to the care of the parents of the child, should be repeated four or five times in succession and repeated hourly. It tends to greatly strengthen both the anal and vesical sphincters.

6. The physician then stands to the left of the patient, and with the tightly closed fist strikes the sacrum. The movement of striking should proceed from the wrist only. The striking of the sacrum slightly excites the nerves leading from the spinal column to the organs in question.

While the technique of this method seems at a first glance to be complicated and perhaps tedious, yet in reality is most easily carried out, and is excellently borne by the little patients, who seem to look upon it more as an amusement than otherwise. The beneficial results are not long in becoming manifest, and if continued recovery will be complete and permanent.

In conclusion we would say that very frequently both parents and physicians are apt to regard nocturnal enuresis as a habit and not a weakness, and commonly endeavor to break the child of the trouble without any treatment other than admonition and punishment. Such a course is grossly unjust and brutal.

Finally, we would draw attention to a cause of enuresis, that is a long foreskin. Not only is phimosis in children a frequent cause of this difficulty but often leads early to masturbation. If this defect exists circumcision is necessary.

Csillag's method is based upon sound physiological and hygienic principles and is well deserving of thorough trial.

DIABETES INSIPIDUS.

Professor DaCosta prescribed the following to stop the large flow of urine:

℞ Antipyrine .....gr. v.
Quininæ sulph.....gr. ij.—M.

To be given twice a day, and if this does not act satisfactorily, increase to three times a day.—*Col. and Clin. Record.*

BOOK REVIEWS.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX FOR 1892. Edited by P. W. Williams, M D, assisted by a corps of thirty-two collaborators in this country and Europe. Illustrated. Price, $2.75. New York: E. B. Treat.

This book of reference has reached its tenth annual edition, and the list of thoroughly competent men by whom it has been compiled is sufficient evidence of the reliability of the work performed. The volume is intended especially as a complete résumé of medical treatment, particularly with regard to the many new remedies that have made their appearance since the last edition of the book, and to new modes of therapeusis by means of old remedies.

It is a well executed attempt to define as clearly as possible the real medical progress of the past year in every department of therapeutics. It is divided into three parts, the first of which deals with new remedies, with a review of their therapeutic applications; the second part is devoted to new treatment, and contains a wide range of information regarding the advances made in 1891; the third part includes reports of progress in bacteriology, medical photography, sanitation, and also details of the improvements made in pharmaceutical preparations, medical instruments and appliances.

Although we wish that more references had been incorporated in certain important departments of the book, we regard it as largely fulfilling its claims as most comprehensive review of new drugs and new treatment, and that to the general practitioner few books will be more welcome and serviceable.

TRANSACTIONS OF THE MEDICAL AND SURGICAL FACULTY OF THE STATE OF MARYLAND. Ninety-third annual session Held at Baltimore, Md, April, 1891. Baltimore: Griffin, Curley & Co.

This edition of the transactions contains a very full report both of the Semi-Annual Meeting held at Cambridge, Md., Nov. 1, 1890, and the regular meetings held in Baltimore during the following April. At both meetings numerous excellent papers were read, so that the volume will be a welcome contribution. The Annual Address was delivered by Prof. Wm. H. Welch, the brilliant pathologist of Johns Hopkins University, who chose for his subject "The Causation of Diphtheria"—a most interesting topic, and dealt with in his masterly style. The article should be widely read because it gives the best that has been written during the last decade on the subject of the bacillus diphtheriæ.

Among other interesting papers we would mention particularly the following: "Eye Diseases of the Unborn" by Dr. Julian Chisholm;" Obstetrical Antiseptics" by Dr. J. Edwin Michael; "Treatment of Diphtheria" by Dr. Joseph T. Smith; "The Relation of Albuminuria to Puerperal Eclamptia;" and a valuable statistical paper by Dr. Randolph Winslow on "Innominate Aneurism."

If all medical contributions were passed upon by a competent body of educated physicians very much less worthless reading matter would appear in our libraries to confuse and mislead the searcher after truth. The publication committee of any large society occupies a most important position, and should freely exercise their right to exclude from publication articles which have not a distinct intrinsic value. Additional care in the admission of members seems also imperative as a preventive measure. At the present rate at which members are promiscuously added to our societies, and at which articles are appearing upon every conceivable topic, it rather startles one to contemplate where the future will land the bibliophile.

THE PEPSIN STANDARD ADVANCED.

There are many varieties of pepsin in market, differing widely in purity, activity and adaptability for therapeutic use.

Whether pepsin be prescribed with success or failure depends on its quality. The physician prescribing pepsin should demand in his prescription a pepsin product which he has convinced himself is pure and active and can be relied upon.

By prolonged investigation of digestive ferments the standard has been again and again advanced. It is announced by a leading pharmaceutical firm that they have succeeded in making a pepsin capable of digesting 4,000 times its weight of coagulated egg albumen under the conditions of the pharmacopœial test.

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PERISCOPE.

THERAPEUTICS.

THE ACTIONS OF ERGOTINE AND ERGOTININE UPON THE CIRCULATION AND THE MOVEMENTS OF THE STOMACH.

From a study of the subject, made by E. Wertheimer and Magnin (*Arch. Physiol. Norm. Pathолog.*, January, 1892.) the following conclusions have been arrived at: 1. Intravenously injected, Yon's ergotine, like Bonjean's ergotine, causes a marked lowering of the arterial pressure, often preceded and followed by an increase. The simultaneous diminution of the volume of the kidney, shows that the fall of the pressure is not due to a vaso-motor dilatation. The direct examination of the intra-ventricular pressure indicates that the fall is dependent upon a weakness of the cardiac contractions; 2. A hypodermatic injection of both ergotines produces an elevation of the arterial pressure, without a previous fall; 3. When injected into the blood, both ergotines produce marked contractions of the stomach; the same results are obtained, though less pronounced, when the drugs are administered subcutaneously; 4. Tanret's ergotine, when given intravenously, causes a rise of the blood-pressure and a slowing of the heart; but it does not seem to act upon the stomach, either in small or moderate doses.

CHLOROFORM IN THE TREATMENT OF TYPHOID FEVER.

Paul Werner (*St. Petersb. Med. Woch.*, 1892, No. 3.—*Revista de Ciencias Médicas de Barcelona*, March 25, 1892.) makes a comparison between the character of the typhoid fever of to-day and that exhibited by the disease 20 years ago. He then showed how the malady can be treated by means of chloroform, condemning, in passing, the employment of iodoform which he thought would have given good results. The author came to use the anæsthetic in the treatment of typhoid fever, after the suggestion of a German physician, and following the results obtained from the experiments of Behving and Salkososke on the action of chloroform as a disinfectant. Werner administers the drug in an aqueous solution, in the strength of ¾ per cent., of which he gives one or two tablespoonfuls every hour, day and night, until the symptoms subside; then the dose is reduced to one tablespoonful, and afterwards this latter quantity is given only every 2 or 3 hours until deffervescence is established. Under these circumstances the patient is allowed only a tablespoonful during the day, in the afternoon. The author has employed this method in 130 patients in the course of 13 months, and has never observed any disagreeable effects. Notwithstanding that the remedy may be considered as only symptomatic, Werner believes that success in the treatment of the disease in question could be insured, by using the anæsthetic as described, during the first days of the disorder; and that even in the latter stages of the disease, chloroform does good. The drug acts primarily by relieving meteorism and the diarrhœa; it likewise prevents cerebral phenomena, bed-sores, relapses and other disagreeable symptoms observed during the period of convalescence.

THE TREATMENT OF BURNS BY EUROPHEN.

Dr. Siebel (*Berlin. Klin. Wochenschr.*, No. 8, 1892) speaks as follows on this subject: I have employed europhen for almost one year in the treatment of burns and injuries resulting from corrosive substances, which, as is well known form the main contingent of accidents at chemical manufactories, and have been for some time past treated almost exclusivley with iodoform. I have treated, with equally good results, about thirty patients suffering from burns and the effect of caustics from the slightest forms to the third degree and arising from all sorts of injurious agents [as for example, hot soda, lye, boiling glycerine, sulphuric and hydrochloric acid, burning alcohol.] My method is this: Apply the europhen in the same manner as is customary to use iodoform; that is, after cleansing the parts, opening the bullæ, etc., cover the burned places lightly with europhen powder, then apply a dressing of sterilized gauze and cotton and fix with bandages. If the burned areas are extensive or could not be readily covered with the powder, I dress the wounds with 10 per cent. gauze, renewing the dressing as often as necessary. Under this treatment exuberant granulations are formed, and the cicatrix is firm, yet elastic. The only disadvantage of this dressing occa-

sionally observed was the firm agglutination of the gauze to the wound, and this could not be completely obviated by interposing a layer of gutta percha paper. In consequence of this adhesion the exuberant granulations were frequently torn on renewal of the dressings and slight hæmorrhages produced.

To avoid this disagreeable feature I made use of europhen in the form of ointments, and at first 10 per cent. strength. As the latter, however, produced irritation in some instances, and in one case a slight eczema, I diminished its strength and finally adopted a 3 per cent. ointment with vaseline and lanolin (europhen 3.0. grammes, ol. oliv. 7.0 grammes; adde vaselin. 60.0 grammes, lanolin 30.0 grammes). I obtained the best results from this ointment, and what was especially remarkable was the marked diminution of the secretions. Owing to the latter effect it was found possible to leave the dressings in place three or four days and to renew them easily and without pain (many patients were enabled to continue work under use of a starch dressing). Severe burns of the third degree healed completely after three or four dressings. The longest period of healing (twenty-two days) was observed in a case of severe injury from hydrochloric acid, extending from the elbow to the wrist over a breadth of five centimeters. It should also be noted that europhen ointment relieved the pains from the moment it was applied. Unfavorable effects or symptoms of poisoning have been never observed by me, aside from the irritation produced by the stronger ointments. In children europhen can also be employed without risk, since it may be regarded as inocuous, at least in the doses which obtain here. I have myself taken internally for a period of three weeks from 5 to 8 grammes of a 20 per cent., solution in oil every day, that is about 1½ grammes of europhen daily without experiencing the slightest discomfort, or even as much an impairment of appetite.

On the ground of these observations I would highly recommend the 3 per cent. europhen ointment in burns of all degrees of severity. The results are better than the use of iodoform, and besides the absence of all disagreeable odor, there is no danger of the toxic effects which, although fortunately rare, are sometimes observed from the application of iodoform."

MEDICINE.

EXPERIMENTAL PANCREATIC DIABETES

According to the *Mercredi Médical.* September 30, 1891, before the French Academy of Medicine, Dr. Lancereux exhibited for Dr. Thiroloix a dog which had undergone extirpation of the pancreas. The animal presented the typical condition of pancreatic diabetes, or what the French call thin diabetes. This condition had developed in thirty-five days after the operation. Glycosuria appeared within two days of the operation, ceasing twice for a period of one week, then was replaced by azoturia. In order to make the animal really ill, complete ablation of the pancreas was necessary, for simple ligation of Wirsung's canal had caused him no inconvenience whatever. The subject of pancreatic diabetes was then discussed by Drs. Germain Sée, Lancereaux, Ollivier, and Semmola. The foregoing interesting experiment Dr Sée considered a valuable addition to those made by Minowski, Mering, Hédon, and Lépine. It confirmed Dr. Lancereaux's earlier studies and discovery of the clinical picture of pancreatic diabetes. As the function of the pancreas upon general nutrition was as yet unknown, the substitution of azoturia for glycosuria in this experiment proved highly interesting. Not all "thin" diabetics could be called pancreatic. Three recent autopsies made by the speaker were negative in this particular. Dr. Sée recalled to the Academy his own experiments, made by the introduction of fluorhydzine. The remedies considered panaceas in the treatment of diabetes, Vichy and opium, were tried. Vichy proved unavailing, and opium hurtful. Dr. Sée strongly recommended antipyrin, and spoke of Dr. Panas's case that under the influence of this drug supported well the extraction of a cataract. In reply, Dr. Lancereaux said that pancreatic diabetes was a more precise term than "thin diabetes." There were several forms of diabetes: the fat form, or the diabetes of lithæmics that become fat at the end of the period of growth, with but little glycosuria, who were but slightly diabetic, slightly polyphagic, and who often live to the age of eighty. With these, diabetes was more a manner of being than a disease. Then there was pancreatic diabetes, and traumatic diabetes (Claude Ber-

nard). Dr. Semmola objected to the interchangeability of the terms glycosuria and diabetes. The first was a symptom merely; the latter a terrible disease that might be nervous, traumatic, lithæmic, or alimentary in origin. There was either insufficient destruction of sugar or excessive production. Dr. Sée replied that, while agreeing with his confrère that an error in nutrition lay at the bottom of all diabetes, he thought the apparent fine condition of certain persons suffering from glycosuria should never mislead as to the gravity of the case, and referred to Dom Pedro, the late emperor of Brazil, who set up a serious gangrene of the foot while at Vichy, by simply trying to cure a corn. In summing up, Dr. Lancereaux said that slight and temporary diabetes was the same thing as permanent traumatic diabetes that soon became fatal, the difference lying solely in the degree of gravity, as in variola and varioloid. Earlier in the discussion Dr. Ollivier spoke of hereditary diabetes and of nervous emotional diabetes. The latter he had seen develop instantaneously upon a sudden loss of fortune. Fifteen years later the patient died of diabetic pneumonia.

THE POISON THEORY AND PHAGOCYTOSIS.

Sanarelli says (*Centralb. f. Bakt. u. Parasit.*, October 31st, 1891) he showed in Nos. 14 to 16 of the same journal how the lymph from the posterior lymph sac of the frog possessed the property of rendering anthrax foci inert whether these latter contained spores or not. Pieces of the spleen taken from animals dead of anthrax and introduced beneath the frog's skin, or cultivations brought into contact with this lymph (free from leucocytes), lose their virulence. The lymph acts, not upon the vitality, but on the virulence of these organisms. Experiments have not shown that the lymph is a true and specific antiseptic capable of destroying the anthrax foci, but that it is an unfavorable cultivation medium. The organisms rapidly regain their virulence when transferred to a suitable medium. All are agreed that the cells quickly seize upon the bacteria, for they may be seen containing bacteria three to four hours after inoculation. Even while in the cells the organisms may excrete toxic substances, which irritate the heat centres and cause a rise of temperature. Metchnikoff has certainly seen movements in the bacilli in these cells, and this must be evidence of life. He has also seen the partly taken up bacilli grow and capable of forming virulent cultures. The question arises as to the value of phagocytosis as compared with the bacteria-killing properties of organic fluids in refactory animals. Sanarelli says that he cannot believe, with the exclusive supporters of this poison theory, that the leucocytes can only take up the bacilli when these are dead, nor yet with the extreme partisans of phagocytosis that there is a veritable conflict between the leucocytes and the bacteria. He prefers to think that, owing to the unfavorable soil, the pathogenic organisms have their growth checked, and that the leucocytes gradually take them up and remove them from the body. This confirms Petruschky's view that the bacteria-killing action is able to explain of itself, and without the least help from the leucocytes, the immunity of frogs against anthrax.—*Brit. Med. Jour.*

SURGERY.

PREHISTORIC TREPHINING.

Although looked at from a modern standpoint the knowledge of surgery possessed by the ancients was of the most rudimentary character, it must not be forgotten that we are indebted to them for many of the operative procedures which the surgeon of the present day is called upon to perform. Necessity, as the saying goes, is the mother of invention, and it is certain that the ancient medical man, although profoundly ignorant of pathology was frequently led by common sense reasoning—some might call it intuition to devise operations, the knowledge of which became lost in the course of time. A familiar instance of this is the operation of rhinoplasty, which was practised from a remote period in India and owned its invention to the custom of punishing criminals by cutting off their noses. Notwithstanding its ancient origin, however, rhinoplasty was not employed to any extent in Europe until the present century. An interesting chapter to the history of ancient surgery has been recently contributed by Professor Hal C. Wyman, of Detroit. In a paper published in the *American*

Lancet, Dr. Wyman describes a skull which was exhumed from a mound on the banks of the Detroit River, and which, in his opinion, presents evidences of having been trephined for surgical purposes. Through the top of the cranium three holes had been bored, bearing such relations to each other that lines drawn connecting them would have formed a triangle. The apertures are remarkable for the smoothness of their sides and their almost perfect circular circumference. Dr. Wyman thinks that no stone or flint instrument could have produced them, but that the material used was obsidian, a species of very hard lava, with the properties of which the ancients were acquainted. From the same mound which furnished this interesting speciman four other skulls had been exhumed at different times, and two of these were also perforated. An investigation of this subject by the author revealed that a number of such skulls had been found in the western part of this country, but especially in Michigan, Illinois and Ohio, while numerous specimens have been discovered in nearly every country of Europe, in Asia Minor and Algeria. It is noteworthy that there still exists a race in Algeria called Kabyles, who employ trephining for cranial fracture making use of instruments which, though of the most simple pattern, are well designed for the purpose. The question of surgical interest is whether these crania of prehistoric races were trephined before or after death. Dr. Wyman states that the perforated skulls in Europe and Asia Minor bears better evidence of trephining as a surgical proceeding than those of America, many, and perhaps most of which appear to have trephined post-mortem. It is generally believed that the trephining was performed for religious rather than surgical purposes, but as the author pertinently remarks, if this were true it is strange that more perforated skulls have not been found since religious observances are practised commonly by the masses. The fact that the openings usually show no signs of cicatrization is, in the author's opinion, no valid objection against the view that they were made for surgical purposes, since the operation may have been resorted to too late to prolong life until repair could establish permanent traces. Moreover, the perforations are so small that, if the operation was successful, the openings would close entirely in a few weeks, leaving no traces which would be likely to be detected by any one but a skilled archæolgist. The author, therefore, concludes that the valley of the Great Lakes once contained a race of people who practised surgical trephining, and this view is in keeping with the teaching of Broca, the foremost authority on this subject, who says that in the stone age young children were frequently trephined for internal maladies.

THE TREATMENT OF STRICTURES DUE TO INCOMPLETE RUPTURE OF THE PERINEAL URETHRA.

Guyon, in a clinical lecture at the Hospital Necker (*Le Mercredi Médical*, 1891, No. 51), spoke of strictures following incomplete rupture of the deep urethra, and exhibited five cases.

These cases are characterized by rapid formation of the stricture, with a persistent tendency to recurrence. The contractile power of the new tissue is never entirely overcome.

In case of complete rupture of the urethra, the rule is to incise the perineum at once, without making any attempt at catheterization, and to join the two ends of the urethra after having passed a sound. Guyon has been a strong advocate of this true surgical principle, and advises in addition the immediate sewing of the ends of the urethra, if they are not too irregular. If the ends are not sufficiently even they may be resected.

This treatment would probably be satisfactory in cases of partial rupture of the urethra, if done at once; but when one is compelled to operate for conditions due to lesions already formed it is better to remove the cicatricial constriction by partial resection of the urethra. The results, both primary and remote, are satisfactory in the highest degree, the more so when compared with other plans of treatment, including external urethrotomy.

The object of the resection of the urethra is to remove the hard, thick, and retractile cicatrix and to obtain linear union, with the result of a smooth scar. Total primary union is frequently obtained —even more frequently than could be expected—and uninterrupted healing takes place in spite of slight contamination by urine.

OBSTETRICS.

PUERPERAL SEPTICÆMIA FROM MEPHITIC AIR.

Guéniot (*Bull. de l' Acad. de Méd.*, 3rd series, vol. xxvii, No. 9) read before the Paris Academy of Medicine on March 1st, 1892, a paper on this subject, which raised a very active discussion. It was based on four cases, in which the mothers all recovered after running great peril; the children were all born alive. The house where the patients lived was in each case malodorous. In the first case, the poisonous air from an untrapped sink pipe in a dressing room attached to the patient's bedroom. A similar insanitary arrangement existed on each floor. In the second case, a filthy privy on a staircase close to a large library room was the source of infection; the patient's apartment was on the other side of the library. In both these cases, the forceps was used with every precaution; Guéniot has employed instruments repeatedly without any similar accidents. In the remaining cases, no forceps was required; the mephitic air came from a privy in the third, and from a ventilating pipe connected with a cesspool in the fourth. Free carbolised intrauterine injections and other precautions saved the patients. Guéniot declared that mephitic poisoning during pregnancy occurred in the respiratory tract; after pregnancy it entered through raw surfaces contaminated by liquids and solids already infected by the poisoned air. The septicæmia so produced was not of a suppurative type; its chief focus was the uterine cavity, where the septic vibrios met, in fluids holding the products of mephitism, a first-rate cultivating medium. M. Alphonse Guérin, who claimed to have discovered the germ theory of sepsis many years before the modern antiseptic doctrines were first promulgated, and M. Charpentier alike scouted the theory of infection through the lungs. That way of infection only occurred in paludal fever. Had the mephitic poisoning occurred through the lungs in M. Guéniot's cases, the patients would have been taken ill during pregnancy, not after delivery: and M. Guéniot did not explain how it was that the other inhabitants of the houses where the patients lived managed to escape infection. M. Charpentier considered that injections were insufficient, the curette should be used as well, but M. Guéniot maintained that the curette often made these cases worse. The septic symptoms only appeared after delivery because then a far larger dose of the poison was taken into the system than before.—*Brit. Med. Jour.*

AN OBSTETRICAL BUNDLE.

This bundle I have found very useful. I have such a bundle prepared for every obstetric case, and its cost, seventy-five cents, is more than made up by the saving of time and subsequent visits. It contains the following:

1. One square yard of rubber cloth to be placed under the patient's hips and thighs—rubber side up, of course.

2. One square yard of canton flannel to be placed on top of the rubber, between it and the patient's body. In this way I make sure of having the bed protected and kept clean, and an aseptic environment, and the rubber can be quickly arranged to carry off the fluids into a suitable receptacle in case of operative procedures.

3. A number of pieces of cheese cloth to use as small towels, and also when dampened with bichloride solution, as pads for the vulva.

4. A new and clean nail brush for each case. These brushes cost three cents, and hence one can afford a new one each time.

5. Safety pins.

6. A narrow bobbin, consisting of three strands, for ligating the umbilical cord.

7. An obstetrical eye bandage. This consists of a strip of cheese cloth, the two edges of which are rolled in and then doubled over a second time. While waiting for the pulsations of the cord to cease I wipe out the baby's eyes, and wrap this bandage around the head and eyes, and pin it. When this is not done the child often rubs its dirty fingers into the eyes before the attendants have had time to wash the child. Since I have adopted this plan I have never had any cases of ophthalmia neonatorum.

8. A small wooden vial containing tablets of bichloride of mercury. I prefer these small ones to the larger size, as they are just sufficient for each dressing without splitting the tablet.—G. E. Abbott, M. D., in *Post-Graduate.*

THE TRANSLUCENCY OF SOLID TUMORS.

Dr. Poncet (*Bulletine de l' Académie de Médecine*) has recently called attention to the fact that translucency is not a characteristic of fluid tumors only, but that this property is shared by certain solid formations. Thus he had noticed translucency in four cases of lipomata of the hand, forearm and axilla, in chondromata of the bones and soft parts, in fungous synovitis, in dermoid cysts with solid contents, etc. It follows from these observations that the mere translucency of a tumor is no positive indication of its fluid character and can therefore be regarded as only of comparative diagnostic value. But even in cases where there is no doubt as to the presence of a fluid accumulation, the fact that it is translucent does not throw much light upon its nature. The contents may be more or less turbid or more or less admixed with blood, without arresting the passage of the rays of light. Dr. Poncet has observed this several times in cases of hydro-hæmatocele and other cysts with bloody contents, and in a case of hæmatoma of the ear upon which he operated the tumor was entirely translucent. He thinks therefore that the translucency of a tumor depends chiefly upon its size and especially upon its thickness.

GYNECOLOGY.

EUPHORIN IN GYNÆCOLOGICAL PRACTICE.

L. M. Bossi (*Rif. Med.*, December 15th. 1891) reports the results of some clinical experiments with euphorin made by him in obsteric and gynæcological cases. He employed it in powder in twenty cases of ruptured perineum, and found that it promoted rapid healing both in slight cases and in more severe lacerations where sutures had been required. He also used it as a dressing to the stump of the umbilical cord in twenty-one newborn babes. In no case did suppuration take place, nor was there any sign of the drug having heen absorbed. In none of the cases was there any appearance of icterus neonatorum. In twenty-nine gynæcological cases euphorin was employed as a fine powder, applied by means of a special atomiser (vaginitis, ulcerations of the os, cervicitis with abrasions of the portio vaginalis and parenchymatous cervico-metritis) or small pessaries about 4 centimetres in length and containing 40 to 50 per cent, of euphorin, which were introduced every two or three days into the uterine cavity (in cases of acute and chronic endometritis). In both these classes of cases the results of the treatment were satisfactory, and Bossi concludes by saying that his experience leads him to think that euphorin acts both more efficaciously and more rapidly than any other substance hitherto in use, not excepting iodoform. —*Brit. Med. Journ.*

URETHRAL CARUNCLE.

Christopher Martin, writing in the *Birmingham Medical Review*, thinks this neoplasm has hardly received the attention it deserves. He classifies it among the vascular tumors. It is exceedingly doubtful whether the connection between the majority of causes usually assigned to it and the disease is more than accidental. On the other hand, he thinks it likely that in many cases the exciting cause is a highly acid or irritating condition of the urine. Uric acid is peculiarly responsible for many cases. At the end of each act of micturition a drop of highly concentrated urine loaded with sharp crystals is left at the meatus. The crystals settle on the mucus membrane, and possibly lodge in the glandular crypts which are so abundant there, and the repeated irritation of their presence determines the new growth. This irritation is partly mechanical, partly chemical. Whether or not it actually causes it, certain it is that, after the growth has developed, a highly acid urine frightfully aggravates the patient's sufferings. The great symptom is pain. The suffering is out of all proportion to the size of the growth. The distress is present on walking, passing urine, during coition or at any time the parts may be impinged upon. The diagnosis is made complete on inspecting the external genitals. On drawing apart the labia, there is seen at the meatus urinarius, or just within it, a small, bright crimson growth. It varies in size from a pin's head to a cherry, but is generally about the size of a pea. It is usually situated on the posterior lip of the meatus. It is very soft and friable, and bleeds readily on manipulation. If care-

fully prepared sections of a caruncle are examined with a moderate power, the growth is seen to consist of very numerous and widely dilated capillary loops imbedded in a delicate connective tissue stroma. The treatment consists in the *complete* removal of the growth. The patient is anæsthetized and placed in the lithotomy position. An elliptical incision is made in the mucus membrane of the vestibule around the meatus, and about one-sixth of an inch distant from it. By means of fine scissors this incision is deepened, and the entire lower end of the urethra, for about one-third of an inch of its extent, is separated from the surrounding tissues. The piece of the urethral canal thus isolated is gently drawn down and removed by a snip of the scissors. The edge of the divided urethral mucous membrane may then be united to the edge of the divided vestibular mucus membrane by a few sutures, or the raw surface may be allowed to granulate. Cicatricial stricture may be prevented by the regular passage of a soft bougie. If a stricture should form it may be easily remedied by slitting the urethra up for about a third of an inch. The prognosis as to the likelihood of recurrence after removal should be guarded.

HYDRASTININ.

Strassmann (*Deutsche med. Wochenschrift*, No. 47, 1891) employed this drug, both per os and by subcutaneous injection, in twenty-seven gynæcological cases. In three of the cases the length of time under observation was too short to draw any conclusions. Of the remainder, six received injections (ten per cent.) and eighteen took the drug by mouth. The largest dose by mouth per diem was 0.15 and the maximum injection 0.2. The drug per mouth was given in the form of pearls 0.025, and by injections 0.05 to 0.1. From forty to sixty pearls were taken in from two to three weeks. The indications were: menorrhagia, after difficult operative labors, endometritis, chronic parametritis, subserous fibroids, metrorrhagia due to some nervous origin, hydrosalpinx, tubercular salpingitis, perimetritis, enlarged ovaries, subinvolution of the uterus post partum, post abortum, atrophy of the uterus, myoma, and subinvolutio uteri without hæmorrhage. No other treatment except rest in bed, which was enjoined in all of the cases. In three cases, tubercular peritonitis, salpingitis, and in one case in which a portion of a retained placenta was afterward removed, the drug proved useless. In the remaining twenty-one cases the action was decidedly beneficial. Hæmorrhages were entirely controlled in from two to three days, menstruation less profuse, not lasting so long, and usually postponed for a few days.

PEDIATRICS.

SURGICAL TREATMENT OF TUBERCULAR PERITONITIS IN CHILDREN.

Alexandrof (*Rev. Mens. des Mal. de l'Enf.*, September, 1891), reported the following case. The patient was a girl three-and-one-half years of age. Two of her paternal uncles were tubercular. She was born at term and nursed by her mother. At the age of two years she had whooping-cough, which lasted five months. A short time afterward she was attacked with diarrhœa, and the belly began to enlarge and show clear evidence that it contained fluid. The heart and lungs were normal, the liver and spleen were not hypertrophied the urine was normal. A diagnosis of tubercular peritonitis was made and the child was kept under observation one month. At the end of this period she was worse, and the abdominal section was performed. Nearly two litres of transparent yellowish-green fluid were removed from the abdomen. The peritonæum was injected and tubercles were scattered over it. There was no irrigation, the wound was sutured, a drainage-tube was used, and iodoform dressings were applied. At the end of three weeks fever and diarrhœa recurred and the fluid began to accumulate again. The wound was reopened and the peritonæum found thickened and œdematous. Adhesions sprinkled with tubercle united the folds of the broad ligaments. The cavity was irrigated with boracic acid solution, iodoform was sprinkled upon the peritonæum, a drainage-tube was applied and the wound sutured. This operation was followed by complete success, the patient going home cured in six weeks. Twenty cases of abdominal section for tubercular peritonitis have been reported in children from two to fifteen years of age. All resulted in apparent cures.

PERTUSSIS.

Dr. Hallet says that under the influence of ozone inhalations lasting a quarter of an hour each day, the number of attacks diminishes, the general condition improves, and the appetite returns in a few days. Dr. Chibret claims that by sprinkling powdered iodoform over the pillow on which the child sleeps, the attacks of coughing are quickly arrested. Dr. Galvagno enploys the following formula:

℞

Resorcin,		
Antipyrin,	āā gr. xv.	
Acid. hydrochloric,	gtt. x.	
Syr. simp.,	f ʒ j.	
Aquæ dest.,	f ʒ iij.	M.

Sig.—Three to five teaspoonfuls daily.

The average duration of cases thus treated does not exceed fifteen days. Dr. Noevius advises an infusion of thyme (100 to 700 parts water), to which are added fifty parts of syrup of marshmallow, and of this from a teaspoonful to a dessertspoonful is given eight or ten times a day, according to the age of the child.—*Bul. Gen. de Therapeutique*, November, 1891.

Ungar, after six years' experience with quinine in the treatment of whooping-cough, is convinced that this remedy will moderate the violence and shorten the duration of this affection. Failures heretofore are due to the administration of too small doses. One and a half grains for every year of age up to four should be given three times daily, and the drug continued in small doses for several days after the paroxysms cease. He prefers the hydrochlorate, administered to young children in aqueous solution, with a few drops of muriatic acid, and flavored with raspberry syrup. Capsules may be given to older children, and should always be followed by a draught of an acidulated solution.—*Weiner Med. Wochen.*, 1891, No. 18.

THE TONGUE IN SCARLATINA.

Neumann (*Deutsche med. Zeitung* 1891, No 63, p. 715) states that in this disease the tongue passes through three stages of change: 1. Tumefaction of the mucous membrane with disturbance of the epithelium; 2. Desquamation; 3. Regeneration of the desquamated epithelium. The appearance of the characteristic "strawberry" tongue is caused, as is well known, by the swelling of the filiform and fungiform pipillæ deprived of their epithelium. Of 48 patients examined for this symptom, the "strawberry" tongue was found in 38 (79 per cent.) in 4 the tongue was in one of the three stages mentioned above; while in 6 no modification was observed. Dyspeptic troubles precursory to the disease often so modify the tongue that the mucous membrane shows no new modification under the influence of the exanthem. The "strawberry" tongue was observed to last for one day in 3 cases; two days in 5 cases; three days in 6; four days in 4; and more than four days in the other 20 cases. It appeared during the first three days in 32 per cent. of the cases, and upon the fourth day in 68 per cent. The intensity of the cutaneous eruption seemed to bear no relation to the modifications of the tongue.

CONGENITAL BALDNESS AND PEMPHIGUS.

Bar (*Arch. de Tocol. et d'Obstet.*, December, 1891) has had a case of a child born with circular patches of baldness on the hairy scalp and a bulla of the character of pemphigus on the right hand. The suggestion is made that the bald spot may be pemphigus in its late stage, rarely seen, however, after birth, on the head. There was talipes, and the pregnancy was rendered more difficult by hydramnios. A syphilitic history could not be elicited.—*British Medical Journal*, February 6, 1892.

HYGIENE.

TYPHOID AND SALADS.

At a time when the profession is interested in discovering every channel through which the poison of enteric fever may be communicated, I should like to call attention to a mode of contagion which has generally escaped notice. We all know the peril of drinking water which has been in the slightest degree contaminated by sewage, but do we realize the danger of eating salads which during their growth have been irrigated by the market gardener with liquid manure? I chanced two years ago to observe a gardener bearing a long-spouted can in his hand, from which he poured two or three ounces of a brown evil-smelling fluid upon or round a row of young lettuce plants. Inquiring the source of this fluid, I was informed that it came from a neighboring cess-pool. Being a constant eater of salads, this little incident caused me to meditate, and also

to make further investigation from other gardeners as to the culture and bringing up of salad plants, and I discovered that it is usual for fluid composts to be thus used, wherever they can be obtained, to encourage the growth of lettuce, endive, celery, and similar vegetables. In the course of this frequent affusion with sewage it must happen that portions of the fluid fall upon the plant itself and percolate between its leaves. The watery portion will be absorbed or will evaporate, meanwhile the close circles of flattened stems and leaves of a celery or lettuce plant form a trap or filter which will hold and retain all solid particles such as the bacilli and other solid contagion of enteric fever, if any be present.

The gardener, of course, never thinks of inquiring into the source of his liquid manure; it is no part of his business to consider whether enteric fever has existed in any adjacent cottage which drains into his cess-pool or manure pond. Thus it may happen that the householder who has strictly guarded his water supply and his drainage from all possibility of enteric contagion, has lettuce or celery plants brought into his house which carry disease and death hidden within their delicate white leafage. Whether he and his family are poisoned or not may now depend upon the washing the vegetable receives. It is not easy to cleanse celery and lettuce in such a manner as to remove all solid particles, if such exist, from the close-gathered leaves about the heart of the plant; moreover, not one cook in fifty knows the importance of thorough washing. Since discovering the above facts I rarely eat any salad which is not grown in my own garden, and dressed by a cook who knows the perils of imperfect washing, but I always contemplate other salads with interest, and I have repeatedly discovered in them minute scraps of decaying organic matter, apparently derived from the market gardener's liquid manure can.

One meets occasionally with cases of enteric fever the origin of which is difficult to ascertain. I must confess I have never yet been able to prove contagion from this source, but the difficulty of such proof is overwhelming—to trace back the lettuce a patient consumed a fortnight ago to its birthplace in some French or English country garden, and to ascertain whether typhoid existed in the vicinity, passes the wit of man. I have, however, had grave reason to suspect such an origin in certain cases where every other cause seemed excluded—it is evidently possible. I should like to know if any of your readers agree with me in the opinion I have expressed, and, if so, I feel strongly that the public ought to be warned of the danger.—*British Medical Journal.*

HOT BATHING IN JAPAN.

In hygienic matters the Japanese have everywhere a habit which may have a lesson for us. In their nightly bath and morning wash the water is never cold, never warm, but always as hot as it can be borne. To foreigners this habit seems very surprising, but the most inveterate Englishman, if he stays in the country long enough, abandons his cold tub in its favor. The cold-taking which it is suspected must follow it is found not to occur if the water has been hot enough. This heat is maintained by a little furnace beneath the bath. In the bath the bather or bathers take a prolonged soaking, the washing proper being done on the bath-room floor; then follows a second and final soaking, drying with towel, and a lounge in bathing wrapper. This habit seems to promote softness and suppleness of the skin, and by persons inclined to rheumatism is soon found to be altogether preferable to the cold bath in every particular. The poorest of the Japanese hear of a cold bath with amazement, and would be sure the man who used it must be a barbarian. With respect to the superiority of the hot bath over the cold, I have come to find that in my own case certainly the Japanese are right.—Dr. Benjamin Howard, in the *Lancet*, January 16, 1892.

MEDICAL CHEMISTRY.

A PERMANENT FEHLING'S SOLUTION.

Fehling's solution by the usual formula is quite unstable. The following modification is suggested by Rossel in *Schweiz. Wochenschr.*: 34.56 grains pure cupric sulphate are disolved in some distilled water; 150.0 grams glycerin and 130.0 grams caustic potassa and then made up to one litre. One c. cm. of this solution corresponds to 5 mg. of glucose. The solution is said to be a permanent one.

TYLOPHORINE, A NEW EMETIC.

Mr. Hooper has extracted from the root of the *Tylophora asthmatica*, a plant of the family *Asclepiadeæ*, growing in East India, an alkaloid to which he has given the name tylophorine. The root has long been used in India as a sure and harmless emetic, and the new alkaloid is expected so have highly emetic properties. Tylophorine is crystalline, slightly soluble in water, but soluble in alcohol and ether. With hydrochloric and nitric acids it forms crystalline salts, which are readily soluble in water.

ALBUMIN TEST FOR URINE.

Dr. E. Speigler suggests the following: Mercuric chloride, 8.0; tartaric acid, 4.0; sugar, 20.0; water, 200 c. cm., as the reagent. Some urine is acidulated with strong acetic acid and filtered. Into a test-tube half filled with the reagent and behind which is placed a piece of black paper, add the urine so it will float on the reagent. If the albumin be only one part in 50,000, either at once or within one minute there will be produced a white ring at the surface of contact.

GLYCERITE OF IODIDE OF IRON.

Within a few months past an English writer brought forward a formula commending this as an improvement for permanency over the use of syrup of the pharmacopœia. A comment was made in our pages that the glycerite was made and dispensed by the editor while a clerk in 1858, and subsequently in his own business established that year. He did not claim that he was the originator of the preparation, for he was not, but the name of the person who had introduced it he could not then remember. It has since recurred to his mind—James C. Leamy, a graduate of the Philadelphia College of Pharmacy, who in 1857 and 1858 was a clerk with W. J. Oliffe at 809 Broadway.

NEWS AND MISCELLANY.

VISITING NURSE SOCIETY OF PHILADELPHIA.

The following cases are cited as illustrations of its work:—One Sunday, a man applied for help not knowing where else to turn. He is an independent American, but what could he do? His wife lay very ill with typhoid fever, his children were mere babies, two, four and six years old, the only relative able to assist him was his mother, who could not reach him for two weeks. After a period of idleness he had just secured work in the Pennsylvania Railroad shops, but that would be lost if he could not be regular in his attendance. He had been forced to spend all his small savings, but promised to pay what he could spare from present earnings. With our "Special Fund" money, we sent him a woman to help with the care of the wife and children until his mother should arrive. A Visiting Nurse also gave daily attention, not only to his wife, but also to his child who was found to be suffering from a neglected attack of croup. It was too late to save this life, but the mother soon began to improve, and the nurse carried daily some of the nourishing food so kindly provided for us by the ladies, who all winter long take turns in sending diet for their patients.

One day recently the nurse was sent to a woman, ill and alone, except for a small dog. At first all offers of help were refused, but by degrees the nurse won her way and learned a sad story of a deserted life, wrecked by the misdeeds of others. In time the necessary cleanliness spread over the patient and her surroundings, even the dog improved and grew more cheerful. There was no one else in the house, but its owner came daily and was kind to the lonely inmate. One afternoon, when the nurse had washed her patient, combed her hair, tidied the room and cooked some oysters to leave behind her the distrustful air softened, and a few earnest words of gratitude were spoken. By the next morning death had come, and the poor little dog lay faithfully watching his silent mistress.

All the cases are not so sad as these. There is often an old woman living alone, and growing more and more infirm until she finds, to her distress, that she can no longer attend to her own cleanliness. At first she distrusts the Visiting Nurse and will almost rudely repel the offered service. By degrees the patient kindness has its effect, and it will be found that the weekly or semi-weekly visit is eagerly awaited, and that from the small pension or the careful savings of years, the nurse

must take her car fare and be urged to accept a trifling present.

An old lady living with her nephew and his family is one of the cases where the nurse's visit brings daily pleasure. Miss L. is becoming too infirm to go down stairs and while the family are kind to her, still there is no one who can attend to her as she now requires. She pays the car-fare for each daily visit and thanks the nurse warmly for the sense of comfort she leaves behind her. The patient sent a sum of money to the Society on its Donation Day.

Then there are the babies, such a lot in one year! pretty little Russian Jews with the rich color in their cheeks, bright eyed children of Africa, Italians with now and then a Madonna-like mother, and the funny twins which always seem to enjoy the double trouble and fuss they make. Fancy twins in a household where the mother proudly displays only one entire suit of baby clothing in preparation for the event. What should we do in such a case without the help of the small bundles given by King's Daughters, the Needle-work Guild, etc.

Often a mother speaks gratefully to the nurses after ten days care, telling them how much better and stronger she feels than ever before after such a period, for their care has saved her strength and prevented any of the complications common in neglected cases.

Those of us who have known the comfort of trained nurses, who have felt perhaps, that precious lives depended on their care, surely can give generous support to send similar help to our poorer neighbors.

AMERICAN SURGICAL ASSOCIATION

The Association will meet in Boston, Mass., Tuesday morning, May 31st, and June 1st and 2d, 1892, in the hall of the Natural History Society on Berkeley street.

Special Subjects for Discussion. — 1. "The Treatment of Uncomplicated Fractures of the Lower End of the Humerus and of the Base of the Radius," by John B. Roberts, M.D., Philadelphia, Pa. 2. "Fibroid Tumors of the Uterus," by John Homans, M.D., Boston, Mass. 3. "Surgical Operations in Persons Suffering from Diseases not Connected with that Necessitating the Operation, such as Chronic Malarial Poisoning, Diabetes, Organic Heart Disease, etc.," by W. T. Briggs, M.D., Nashville, Tenn. 4. "Surgery of the Tongue," by N. P. Dandridge, M.D., Cincinnati, Ohio. 5. "Conditions Demanding Excision of the Globe of the Eye," by W. H. Carmalt, M.D., New Haven, Conn. 6. "Ancient Contractures of the Hip and Knee Joints," by T. F. Prewitt, M.D., St. Louis, Mo. 7. "Report of Operations upon Spina Bifida and Encephalocele, with Remarks." By A. T. Cabot, M.D., Boston, Mass.

PHINEAS S. CONNOR, *President.*
J. R. WEIST, *Secretary.*

A CLEAR STATEMENT:

Being a brief summary, from the note-book of an undergraduate, of a lecture on tuberculosis by a professor of liberal but uncertain opinions.

The microbe of consumption that Koch has hunted out,
I beg to say we know most clear and plainly *all* about.
And I myself, as you all know, have always held it wise
To tell at once what knowledge new pathology supplies.
And so I wish to state, with no periphrasis or doubt,
Bacillus' source, course, consequence, within us and without.
This troublesome bacillus *perhaps* may—might be—cause
Of phthisis—*or* might not be—our logic has such flaws!
This troublesome bacillus, a most annoying kind,
In various herbivora, as well as man, we find,
But, whether really dangerous, as modified by cow—
I—well—I'd really rather not state definitely how.
The question of contagion, too, a *most* important one;
I'm nearly, quite, almost convinced the thing cannot be done.
Each wavering pathologist has views as yet quite dim,
Aud how can we clinicians be more accurate than him?
Therefore, I think (as I have said)—that is—I should suppose—
The tubercle-bacillus is—oh!—everybody knows!

K——.

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Professor of Chemistry, N. Y.

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THE
MEDICAL AND SURGICAL REPORTER.

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Clinical Lectures.

EXERCISE IN CHILDHOOD AND YOUTH.

By J. MADISON TAYLOR, A. M., M.D.

PART OF A LECTURE DELIVERED AT THE FRANKLIN INSTITUTE, PHILADA., DEC. 7, 1891.

Gentlemen:—The normal states of the infant are feeding and sleeping. There is little more needed during the first year of life than comfortable, clean surroundings and abundant food at suitable intervals, supplemented by ample rest. Plenty of air should be allowed and not much light. The little one should be left alone as much as possible. In certain foundling asylums abroad, I am told the babies are fed and put into well ventilated, darkened compartments immediately, and under this system they seem to do best. Distinct harm results from over-much attention, and the excitement which comes from fond parents or curious relatives is one of the most hurtful influences exerted in early infancy. Absolute freedom should be allowed to the limbs, yet it is true that certain savage nations keep their infants in rigid dressings until they are able to make attempts at walking, and among such there result exceedingly fine physiques. This custom on the part of these savages may reasonably be a hint to us that enforced rest to the limbs is wiser after all. Then, as the child gives distinct evidence of wishing to be more aggressive in its movements, it will probably be high time to encourage it. At any rate, in the second year freedom might be allowed, and a good plan is to place the infant upon a soft substance on an even surface, like the floor, and encourage all spontaneous movements, and to supply it with the simplest kinds of toys. Try few educational measures yet.

With the eruption of the first set of teeth, about the end of the second year, a more varied diet is admissable also a wider range of object lessons, though these should be still of the simplest. At the first plain indication of weariness the child should be encouraged to sleep. As the motor energies become more plainly manifested, so may they be cautiously aided and abetted. In all this be guided by the greatest caution lest unwise interference be hurtful. Take lessons from experience, especially of the natural promptings of the youngster, and beware of all fine-spun theories of childless philosophers and narrow minded grandparents. As soon as the child makes definite efforts at standing, reaching out for objects, etc., supply it with harmless toys, especially washable ones which can be kept chemically clean, as of rubber or metal. Let it exercise its senses; its muscular sense, teaching it dimensions of external objects, its eye in judging of distances and colors, etc., as well as the co-ordination of its limbs. Let it pull things about, and put them into its mouth. All animals wish to taste or put objects to their mouth, because the lips are equipped with the most sensitive nerves, and here it can obtain most accurate impressions. The hands have not yet learned nicety of touch, but by handling blocks, etc., soon accuracy comes.

The eye in the child is a perfect organ, and so, indeed, is the digestive tract, with limitations, of course, as to capacity. Not so, however, the limbs and trunk, which have much to learn and large need for exercise. It is best that the objects which immediately surround the babe should be of uncomplicated shape and color, such as the dawning comprehension may compass and use for comparison as contact is had with more complex ones. Bear in mind

that the best human animals come from simplest households, as nearly as possible to nature, whose phenomena offer the best object lessons. Civilized comforts and safeguards are not to be despised, but these should not offer elements for confusion. A child is best left much alone. Avoid artificial constraints. When wearied out with joyous spontaneous movements which quicken its circulation and expand its lungs, and when feasted with slow contemplation of surrounding objects, it should be able to lie down comfortably and sleep.

By and by the bewilderment of early impressions will be replaced by a growing confideuce in the maturing powers and values of surrounding objects. All childhood should be passed in a series of simple object lessons. Some small encouragement is very well, but no distinct teacher of any kind is needed until the motive powers are well established and a fair stock of intelligence has been acquired by unaided mental digestion.

The homunculus when fully able to cruize about the room or garden may do so, clambering up and tumbling down. So shall there come consciousness of its own powers and limitations, so learn to save its own head with the hands and gleefully secure coveted objects. Thus little by little stores of information may be acquired, a knowledge which is all its own, because come at through abundant slow contemplation in its own time and manner and by its own unaided powers. These powers, too, grow by what they feed on. Selection is thus exercised; eye and hand and leg are brought to the fullness of their strength, and the highest human faculty, judgment, is soon or late acquired. In the mere bodily activities a healthy child may be trusted to do enough and not too much. If urged beyond its own choosing, the element of excitement comes in, always a confusing factor in measures or results.

Soon the greatest joy will be to play with others of its kind. Impressions from inanimate and other objects will no longer satisfy. Then comes the period of childish games, when running, shouting, rolling about, give tone to muscle and prompt conduction to brain. The cerebral part of this partnership, by the way, is first largely limited to balancing and the motor functions generally. When in the course of progress a certain time comes, by common consent, wherein systematic teaching should be had, then must the bodily powers and parts receive the closest scrutiny. No school system is adequate which does not consider the training of the body as of almost equal consequence with the mind. I venture to assert with small fear of contradiction that no school is fit for your children or for mine which does not supply intelligent medical supervision. Among the more comfortable classes this will be supplied by the family physician, who may have at one time or another sufficiently looked after our boys or girls. When this is not done among those who use the large public schools, a skilled medical supervisor should be provided who shall pass judgment upon every single scholar. Thus will be brought to light heretofore unrecognized weaknesses, and, moreover, a surprising number of deformities; or in the needful repetitions of these examinations hurtful tendencies may be early recognized. In the matter of the eye supervision is becoming pretty generally exercised, and much good already accomplished thereby. Of even more importance, however, is the question of weak hearts, unsymmetrical backs and limbs, narrow chests and twisted pelves. Soon or late calisthenic exercises, military drill, class singing, or some systematic form of body training will be a regular part of the day's instruction in most schools. A steady advancement is being made in the wisdom of educational authorities in all lands. To be sure, we may never attain to that almost perfect system of education pursued by the early Greeks the products of which are types of physical and mental beauty which shall serve as models for all time. Then, the pedagogue, the man who walked and talked with his scholars, was equipped with wisdom as well as learning, and capable of intelligently directing the activities of his pupils in body as well as mind. We may hope to have more of this open air object teaching by stream and field, which now is used to supplement the the didactic in many large schools and colleges. As parents become more thoroughly aware of the economic needs of educational measures, they will demand as much, or more, of physical care for their children at the hands of instructors.

Let us turn for a moment to the subject of spinal deformities. This is a common result of the ordinary school life, when

either unduly prolonged or unprovided with proper safeguards in the way of daily supplies of opportunities for exercise. I quote from Dr. J. K. Young, a well known orthopædist of this city: "The great majority of cases of this curvature originate in children from the age of five or six and upward and young persons who have been recently in school. This might be thought a mere coincidence, for the school period is necessarily that of development and curvature is a disorder of development. But there is evidence to show that school work and customs are genuine causes, not the sole causes certainly, but very prominent ones. The origin of latent curvature depends chiefly on two things, weakness of the muscles which supports the spine and bad position of the body. Weakness, though not a necessary circumstance, is an extremely common and important one. A bad position constantly maintained will twist the most athletic frame."

Again, Dr. Buckminister Brown says: "A most pernicious habit, and one which I have very often noticed in school girls, and less often in boys, is that while we are talking to them or during recitations, they stand on one leg. This position is assumed involuntarily, and it is almost always on one and the same leg to which the weight is thrown. The effect of this is easily understood. One side of the pelvis is lifted up, curving the spine on the loins; the opposite leg is advanced in front of the other, twisting the pelvis and rotating the vertebræ. Of course, the curve of compensation takes place between the shoulders; one is depressed, the shoulder blade gradually projecting, and with the change, and, in fact, assisting to produce it, occurs the spinal twist."

These various warping agents which are inevitable among children confined to the school seats, or to the small variation of standing at their tasks, produce a large amount of actual damage, which remains as seed from which trouble grows, or simply impairs constitutional vigor. A large proportion of these are transient effects and overcome by wholesomer living later, hence never are recognized *per se.* Statistics on the subject are not yet sufficient, a single illustrative instance, however, is significant:

Guillaume, in 1864, examined the schools of Neufchatel, and found in 350 boys, 18 per cent. affected with spinal warping, and among 381 girls, 41 per cent. Careful searching in other schools would give at least analogous results. Now, what is the preventive for this. I quote the uniform opinion of several authorities, who one and all recommend varied muscular activities taken at suitable times as the most important measure. The best are vigorous outdoor movements, games, leaping, running, climbing, and all sorts of hard play, the more varied the better. These should, of course, be not unduly prolonged; especially for girls, it is harmful for them to make large scores at the skipping rope and long match games at tennis or even croquet. Indeed, the best forms of exercise for children are those which speedily shift from consecutiveness and interspersed with ample periods of rest. In girls there exists an inherent, ofttimes ineradicable indolence, a delight in sacrificing themselves to the proprieties, a misguided sense of decorum which early hinders their right indulgence in active sports. In this their mothers encourage them blindly; even the best of mothers. This early subordinating of their physical impulses leads also to a disregard of the calls of nature, coupled with a silly squeamishness about attending to prompt evacuations and lays the train for lifelong discomforts and disturbances. No one but an active practitioner of medicine can believe how universal is the prevalence of torpid bowels and inactive bladders among the female sex. They seem to revel in the discomforts which arise from the neglect of these most vitally important functions. Again, this inactivity lessens their taste for water, since they rarely sweat as they should daily do. Hence, in unnumbered ways it is important to insist upon much activity among children.

The ordinary sports of boyhood and youth are invaluable. If ample opportunities by stream and field are afforded excellent results follow in healthful and beautiful forms. The tendency is, however, to work along lines of least resistance to specializations and to emphasize already well-marked aptitudes.

This pursuit of outdoor competitive sports is necessarily limited to very few, Dr. Sargent says to probably less than one per cent. of our vigorous young men. Even among the members of athletic organiza-

tions only 10 per cent. are really active. He goes on to say: "The cause for so little general interest in athletics is due to the increasing tendency with us, as a people, to pursue sport as an end in itself rather than as a means to an end." In making excellence in the achievement the primary object of athletic exercises we rob them of half their value in various ways—by (1) increasing the expense of training; (2) by increasing unduly the time devoted to practice; (3) by reducing the number of active competitors; (4) by relying upon natural resources rather than upon cultivated material; (5) by depriving the non-athletic individuals of incentive to physical exertions; (7) by depriving them of their efficacy as a means to health. He points out the fact that the harmonious development of the physique and the building up and broadening out of highest types of manhood and womanhood ought to offer inducements enough to work for.

As to how this may be best accomplished deserves special and constant study—not only for means but incentives. When obvious defects exist judicious, skilled direction is needed in such matters. At Amherst systematic class work obtains good results. In Princeton this was done in my day by compulsory drill work with Indian clubs, etc. Military drill has immense value. In the German Turngemeinde all over this land as well as the Fatherland classes from the youngest to the oldest drill in calisthenics regularly and these are supplemented by outdoor work—long walks in vacation times and to a moderate degree field sports. The best results come from systematic measures.

For those who need remedial training by movements the system of Ling is beyond all praise. A host of followers have taken up his suggestions and variously elaborated them and claimed originality for their view, more or less falsely indeed, but all acting upon his clearly defined principles. The Delsarte system of expression promises to be a useful corollary to physicial training.

One conclusion stands out clear and distinct from all this inquiry. It may be accepted as almost an axiom that no instance of organic lesion is yet demonstrated to be the direct and sole result of bodily exercises or competitions in one adequately trained.

NEW OUTLOOKS IN THE PROPHYLAXIS AND TREATMENT OF TUBERCULOSIS.*

By FRANCES P. KINNICUTT, M. D.

NEW YORK CITY.

The lecturer introduced his subject by an allusion to chemotaxis and phagocytic immunity, and their important bearing upon the subject of the prophylaxis of disease. Prophylactic measures directed against tuberculosis had for their object, to destroy the vitality of the bacillus outside of the body, to minimize the sources of infection, and to render the tissues insensible to its presence. It was not long after Koch's discovery of the tubercle bacillus, in 1882, that it was observed that the bacilli were not found in the air exhaled by tuberculous patients, but that they were abundant in the sputum, and that dried sputum was the most common source of infection. The stools of human beings afflicted with tuberculosis of the bowel are a less frequent, but an undoubted source of infection, as are also milk and meat from tuberculous animals. Experiments carried on in Germany upon the dust taken from hospital wards, living rooms of phthisical patients and other places, have yielded interesting results as to the dissemination of tuberculosis. Out of 94 animals inoculated with dust from the hospitals, 20 became tuberculous, and virulent bacilli were obtained from 15 out of 21 medical wards. Negative results were obtained on the other hand, from dust of surgical wards, and from the streets and inhalation rooms which were investigated. Virulent bacilli were obtained in a private house six weeks after the death of an inmate who had been suffering from tuberculosis. The collective investigation committee of the British Medical Association, in 1883, received, in answer to a series of questions concerning the infectiousness of tuberculosis, 1,078 communications from various medical practitioners. Of these, 673 were to the effect that cases of tuberculosis originating in infection had not come under their notice; while 261 gave what was considered positive proof of its

* Abstract of the Middleton Goldsmith Lecture, which was deliverd under the auspices of the New York Pathological Society, at the New York Academy of Medicine, May 11th, 1892.

occurrence, 39 were doubtful, and 105 were negative. There were 192 cases of probable infection of a husband by a wife, and *vice versa*, and in most of these, there was no hereditary predisposition. Very striking facts are brought out by a study of statistics gathered from the Catholic Nursing Orders in 32 convents, during the twenty-five years previous to 1889. The general annual death-rate from tuberculosis is one-seventh to one-fifth of all deaths, but in these convents, the death-rate from tuberculosis alone is shown to be 62.88 per cent., and in some of the convents, it even rose to 75 per cent. The average age at which death occurred was 36.27 years, which is lower by ten years than the average in those trades which are notoriously the most unhealthful. In considering these startling statistics, it is also to be remembered that the health of all persons entering these orders is excellent, as their admission depends upon medical certificates. The speaker said that he had collected a large number of cases illustrating the infectiousness of tuberculosis, several of which he cited. A healthy girl of fourteen years, without hereditary predisposition, contracted tuberculosis from wearing the earings of a consumptive. A male child, vigorous at birth, had eczema of the abdomen when three years old, but an examination at this time showed no tubercle bacilli here, but about one year later, after sleeping constantly with his consumptive mother, the bacilli were found in the eczematous vesicles.

In considering methods of attacking the tubercle bacilli, one is at once struck with their enormous numbers, thus: Dr. T. Mitchell Prudden, of this city, has computed that 24,460,000 tubercle bacilli are present in the daily sputum from a single phthisical patient. Tuberculous sputum has been dried and kept under the ordinary conditions found in dwelling houses, and has been found to preserve its infectious properties for two and a half months, and other experiments seem to show that its virulence may continue for a period of three years. Most chemical disinfectants exert but a very feeble action upon the tubercle bacillus. A ten per cent. solution of carbolic acid is found to have no effect upon the bacillus in sputum after a period of twenty-four hours, while corrosive sublimate is valueless on account of its coagulating the albuminoids in the sputum. A ten per cent. solution of creolin, or of aseptol, has no more action than carbolic acid, but lysol in the same strength will sterilize the sputum after an exposure of only twelve hours. These results show that we possess no practical means at present of efficiently disinfecting sputum by chemical agents. The bacilli are usually killed by a temperature of from 90 to 100° C., but simple rinsing of sputum cups with boiling water is not sufficient, and is not without danger to the attendants, as numerous observers report cases of infection of cuts with sputum. Both in hospital and private, paper sputum caps are the safest and the most convenient, as every day the soiled ones are burned, and new ones supplied. Public sentiment should be sufficient to compel the proprietors of hotels and other places of public resort to adopt more stringent measures than at present for cleansing and disinfecting the rooms and preventing the spread of this disease, and legislation is urgently needed which shall provide for a proper inspection of dairies and slaughter-houses. Such a bill will probably be introduced into the legislature of New York state during the present session.

Turning now to the remedial measures, it is found that three possibilities present themselves: (1) The discovery of a method of treatment capable of destroying the bacillus within the body; (2) the discovery of some substance, organic or inorganic, which may deprive the bacillus within the body of its harmful effects; and (3) the discovery of a principle which when introduced into the human economy, will increase the germicidal power of the fluids of the body by stimulating cell activity.

It is supposed that the bacilli in their growth produce in the living tissues, as in artificial cultivations, certain substances, which have various, but always deleterious effects upon the surrounding cells and that among the substances produced by their action, is one which destroys the living protoplasm, and produces a coagulation necrosis, which, in turn, diminishes the supply of nutriment to the bacilli, and checks their development. Koch believes that by the introduction of tuberculin, the extent of this necrosis is increased, and consequently, the nutrition of the bacilli more seriously impaired. Rosenbach, however, denies that tuberculin

possesses any specific action, and claims that the reaction observed after injections of tuberculin is due to general irritation. Similar constitutional disturbances follow the injection of cantharidal salts, or of other bacteria. He believes that when necrosis occurs, it is rather secondary to an acute inflammatory necrosis. William Hunter, of England, and Klebs, of Germany, have conducted experiments with the object of separating the deleterious ingredients of tuberculin from the remedial ones, and Hunter has found, (1) that the remedial and inflammatory actions of tuberculin are connected with the presence of certain albumoses, while the fever-producing agent is a non-albuminous substance ; (2) that by chemical methods, the fever-producing agent can be removed; (3) that the fever has nothing to do with the remedial action ; (4) that a truly remedial action resides in an albuminous substance derived from the plasma of the bacilli themselves, and not from their action on the surrounding tissues ; (5) that this substance can be isolated. The principal modifications of tuberculin with which he has experimented are, A, C, CB, and B. A differs but slightly from tuberculin; C causes scarcely any local inflammation, but produces a high fever; CB contains the remedial agent, but does not cause the usual constitutional disturbance; and B contains the remedial properties of CB, and also excites local inflammation, but produces no ill effects. Klebs' experiments though undertaken quite independently, have yielded very similar results. Dr. Prudden has made some experiments which indicate that dead bacilli, freed as far as possible from the products of their growth, are capable of stimulating cell activity enormously, and of producing lesions morphologically similar to tubercle, but which are not indefinitely progressive, and do not induce an infectious disease. The legitimate conclusion from his observations is, that coagulation necrosis is dependant upon a metabolic product of the growth of the bacillus. Whatever beneficial effects were obtained from the original tuberculin were *in spite* of the production of coagulation necrosis. The lecturer agreed with Trudeau, Schede, and others, in the opinion that in some modification of tuberculin would be found a truly valuable remedial agent in tuberculosis.

The speaker then referred to several new methods of treatment. Professor Liebreich had hoped by the administration of the salts of cantharides, not only to cause an effusion of serum but a stimulation of cell activity, and consequently an increase in the germicidal action of the serum on the bacteria. Potassium and sodium cantharidates were administered hypodermically in doses of $\frac{1}{640}$ to $\frac{1}{320}$ of a grain, at intervals of forty-eight hours or more. The results, however, have been rather disappointing. Another method of treatment had been tried founded on the claim that in rabbits which had been inoculated with the tubercle bacillus, the evolution of tuberculosis can be arrested by a subsequent inoculation with the serum of dog's blood. As fibrinous induration is to be regarded as the natural curative process in tuberculous lesions, it has also been suggested that as chloride of zinc when injected in small quantities causes such an induration, injections of this substance at the site of the disease, would prove beneficial. Twenty-two patients were subjected to this treatment in France, and while the results showed that it is possibly useful in tuberculous disease of the joints and glands, the use of intra-pulmonary injections of a ten per cent solution are hardly practicable, and are of doubtful efficacy. Renewed interest in the use of creasote in tuberculosis has been awakened by the labors of Dr. Beverly Robinson, of New York, and at the present time, the literature of the subject, is quite voluminous, and is exceptionally favorable. It is generally admitted to exert a favorable influence on nutrition by reason of its action upon digestion, and it is also probable that its local antiseptic action is also beneficial. Some experiments which have been recently carried out for the lecturer by Dr. John S. Ely at the pathological laboratory of the College of Physicians and Surgeons, tend to confirm Guttmann's experiments in test-tubes on the germicidal action of creasote on the tubercle bacilli; but still more recent investigations indicate that creasote immediately upon gaining entrance to the circulation, enters into chemical combinations in the blood, forming substances which are without specific germicidal power. Trudeau has conducted some experiments which show that even in heroic doses, creasote is incapable of preventing the development of experimental tuberculosis or

of arresting its progress. As guaiacol constitutes from sixty to ninety per cent. of beech-wood creasote, it may be considered as the active principle of this drug, and a more suitable preparation for internal administration. The carbonate of guaiacol, however, being a simple, definite, crystalline substances, which can be obtained chemically pure, is still more eligible. It is tasteless and odorless, does not cause digestive disturbance, and is decomposed in the intestine into guaiacol and carbonic acid. The speaker said that he had made some use of this drug in his cases at St. Luke's Hospital. It had a favorable effect on the night sweats, but not on the hectic, and in one case, complicated by chronic diffuse nephritis, there was a marked increase in the albuminuria, until the drug was withheld. It was administered in doses of from four to six grammes daily without discomfort. Seven cases in the hospital of well marked tuberculosis were treated with the modified tuberculin, three for three months, and the others, for about two months. There was no appreciable change in two of them; in a third, there was a remarkable improvement in the physical signs; of the four remaining cases, there was no improvement in one, marked improvement in one, less marked improvement in another, and in one, at least temporary arrest of the disease. The speaker thought that tuberculin exerted its effect chiefly on the specific lesion, while creasote more particularly affects the nutrition. Modification "B" seemed to be the preferable one, as the patients can be continuously about the wards or out of doors. The bacilli were found to be constantly present in the sputum in undiminished numbers. Both creasote and guaiacol may be safely given in large doses and by subcutaneous injection, but they are equally efficacious when given in much smaller doses, and by the mouth. Whatever method be adopted, these drugs must be administered for a long time to secure any marked benefit.

FOR COCCYDYNIA.

The following suppository, employed at bedtime, will afford relief from the pain of coccydynia and permit sleep:

℞ Ext. belladonnæ.....gr. ¼.
Ext. hyoscyami.....gr. ¾.
Iodoformi.....gr. ¾.
Ol. theobromæ.....gr. xx.—M.

—WHITLA.

Communications.

MOLLUSCUM FIBROSUM. *

BY E. A. COBLEIGH, M. D.
CHATTANOOGA, TENN.

My subject is one of much clinical rarity. No one man can have very large observation or experience with this affection. Hardaway, of St. Louis, has seen but 3 cases of it in his special practice covering 6,724 dermal cases of all kinds. Anderson, of England, has seen but one out of a total of 24,891 in hospital practice. Duhring is authority for the statement that the annals of the American Dermatological Association gave but 9 cases in their total of 16,863, and Morrow, mentioning the same statistics when they had swelled to a total of 112,863, gives only 86 cases of molluscum of all kinds.

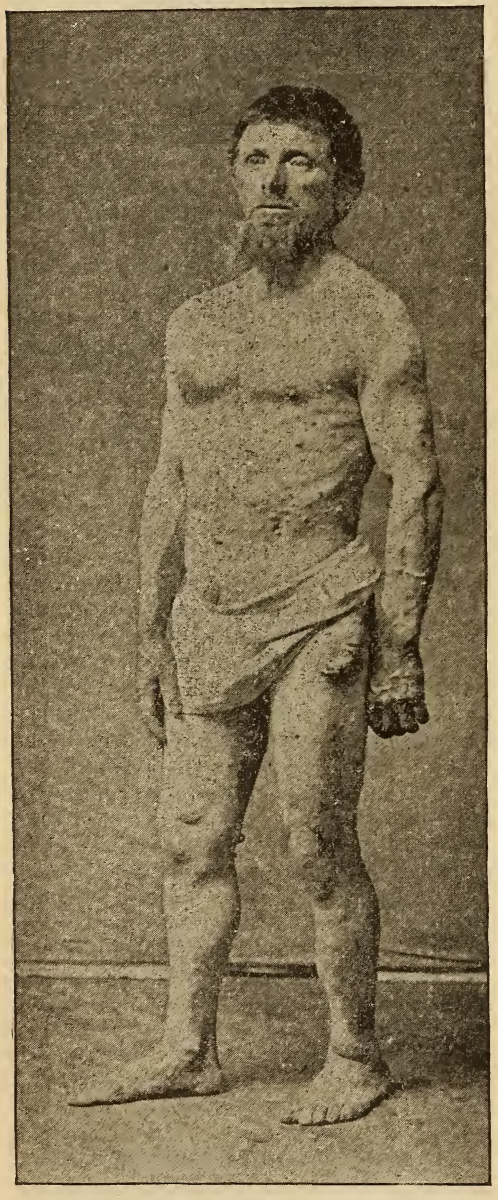
So it may seem a little out of the usual line to bring such a subject here but possibly it may, by reason of its departure from the routine, likewise prove refreshing; and certainly to me it has had an interest from the fact of one of these very cases falling under my rather recent observation, it being the second I have seen in a practice of about a score of years. Furthermore the patient resides within the bounds of your immediate territory, lending further interest, and I intend herewith presenting photographs of him before you, taken at the date he was seen by me, to illustrate my paper.

The affection has been variously designated at different periods since its first recognition as a separate disease and by different writers. Its several names are Molluscum Fibrosum, Fibroma Molluscum, Molluscum Pendulum, Molluscum Simple, Arelo-Fibrosum, Molluscum Albuminosum, and by Fox referring to its single lesions, Polypus of the skin. The name I have here used comes from *Mollis*, "soft, resembling mollusks," and *Fibra*, "fibre."

Generally speaking, the term is applied to a generalized dermal fibromata. Van Harlingen divides it further into multiple or small-tumor form and the single or sparse variety. And other authors state that these patients—referring to the generalized kind—are liable to coincident der-

* Read before the Tennessee State Medical Society, at Knoxville, April 12, 1892.

matolysis, pachydermatocele or cutis pendulum as they variously designate the accompanying manifestations. Fox likewise refers to a fungating form with rapid development and evolution which differs from any described by other writers and



seems to border rather on dermal sarcoma than true molluscum as the term is limited of late years.

Bateman was the first observer to accurately describe this affection. It is most common in the East and the Orient—also to dark skinned races as the negro, therein resembling keloid; but it is by no means absolutely confined to them. Some authorities aver that females are the most frequently affected, while others declare that the sexes are about equally liable.

The disease consists, in its generalized form, of pea to egg-sized superficial and integumentary neoplasmic nodules, more or less firm in consistency, well circumscribed, occuring singly or but few in number, these are mostly found on nose or cheeks, and regarded by their possessors as moles or warts. Occasionally met with on the hairy scalp, they are there designated *nævi pilosus*. Soft, filamentous warts of old people are a species of new growths bordering at least on molluscum, into which it is not unusual for them to actually develop as growths manifesting all the true characteristics of those tumors, and indistinguishable from such as are common to that affection. Berry-like nævi materni are also regarded by some competent observers as closely allied to molluscum. All move with the derma and are confined to it.

In the multiple form, as already stated, the tumors show varying dimensions and forms, from a small pea up to an egg or even larger. Later I shall speak briefly of a larger variety. These nodules are roundish, button- or plaque-shaped, embedded or seemingly subcutaneous, pyriform or polypoid when pendulous, generally pedunculated but sometimes sessile. In consistence they are either firm, fibrous and tense; or gelatinous, flaccid and flabby; most commonly the former at first and later becoming soft by absorption of the contents of their alveoli. The larger ones are frequently glistening and show a tense surface as if œdematous. Their overlying integumentary layer is mostly of normal hue but may be pinkish or purplish. Hairs and comedones sometimes occupy the surface particularly of the larger ones. Their general consistency is like a mammary gland, but firm pressure always yields a harder, vaguely defined central core over which the walls roll under the finger and give the peculiar condition variously denominated "empty purse," "scrotum without testicles," "seedless raisins," "loose bag." Virchow alleges that the small growths are sometimes protuded from the superficies of the larger.

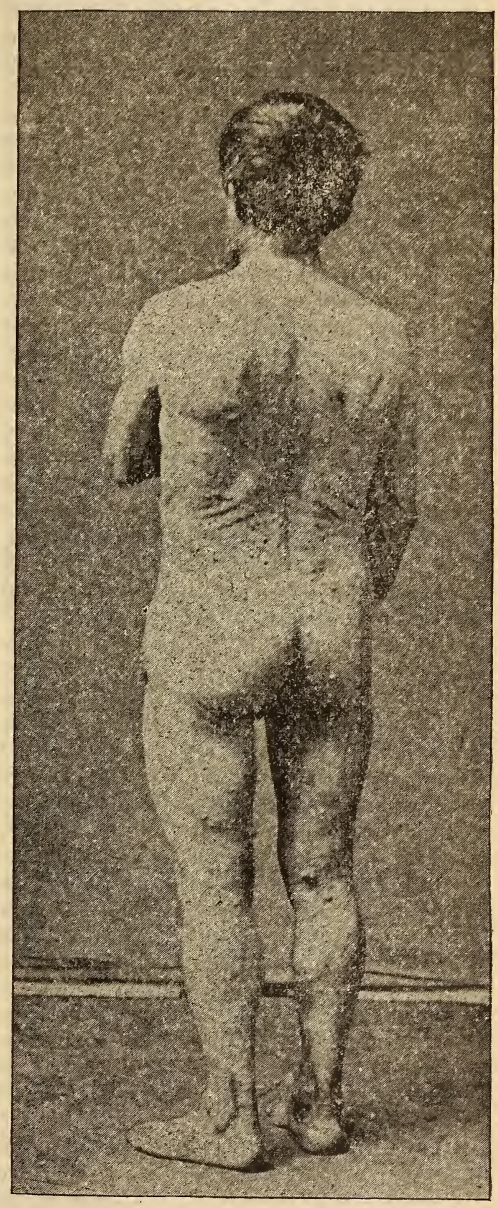
In special situations we find the fa-

vorite sites of predilection of the circumscribed molluscum at the last cervical vertebra, on the chest under the breasts, on the temples, the upper eyelid, behind the ears, on the hips and the labia majora, and when found in these situations it is rare for more than two or three tumors to exist. In the generalized form—which is the most classical and the one specially dealt with in this paper—the neoplasms present in numbers from a few to thousands and up to large size, for among the majority of minute ones a few quite extensive of area are usually found. These show a preference for the trunkal surface where they are occasionally more or less confluent, but the face does not often wholly escape nor the extremities. And they have been found in rare cases on the palms and soles as well as in the internal organs of the body.

Regarding subjective symptoms the affection is utterly devoid of inconvenience other than from the size, appearance, numbers or location of the nodules. They show not the least contractile tendency such as marks the kindred neoplasm keloid. They are indolent generally and of remarkable tardy growth. Dr. Hasnimoto, of Japan, exhibited before the Medical Society of Tokio a case of forty-two years standing wherein the patient carried on his person a counted total of 4,503 tumors of various sizes. Rarely the growths degenerate into carcinomatous conditions or sarcoma or epithelioma. Marasmus and tuberculosis are sometimes coincident states, and Hebra observed that persons affected with molluscum were uniformly stunted in their physical and mental growth though not imbeciles. Hebra's observation has been confirmed by most later dermatologists though the general health of these unfortunates is not commonly impaired to any marked degree.

Authorities mention true fibromata, myo-fibromata, nævi keloid and dermatolysis as kindred formations if not simply differing varieties of similiar pathological processes, and I confess that it seems to me as if all properly belong in the molluscous group as overgrowths of connective tissue of the dermal structures. And I do not know but Elephantiasis Arabum should share the same classification, just as eczema in its diverse forms was formerly confused by undue refinement of classification.

The commoner variety of molluscum consisting of one or few growths deserves passing mention—I refer to the form showing very large tumors, not the small nodules with facial predilection. This variety is generally called fibroma pendulum, pachydermata, dermal hypertrophy, etc.



These neoplasms attain sometimes enormous proportions as shown by the weights of some removed by various surgeons, notably one of 32 1/2 pounds taken off by Heyland. Most molluscum growths show a tendency after attaining certain indefinite

size to cease growing further, merely remaining thereafter as cumbrous bodies without growth. This is likewise true of the vast majority even of the smaller tumors of the generalized variety. And as bearing on the probable unity of the forms of skin hypertrophy already mentioned Anderson figures, in his excellent work on dermatology, a striking case of a collier in the old country who manifested, simultaneously in his person, all of the allied forms even to a leg like elephantiasis, the left being 7 inches larger in the circumference than its fellow, and the affection having been in progress from childhood. It seems as if persons with a dermal tendency to fibrous neoplasms may manifest it either by an extensive and almost universally existent energy of production in the way of multiple tumors or conversely by an absorption of the dormant powers of systemic overgrowth in one locality by the evolution of one or two enormous dermatolysis. And in these latter cases, as pointed out specially by Wilson, vascular increase or enlargement goes hand in hand with the fibrous hypertrophy giving venous dilatation to prodigous extent and rendering operative procedures for their removal particularly bloody.

The ætiology and pathology of this disease can be considered best jointly. With regard to the former, little seems to be known. It is generally thought to be either an hereditary affection or at least one of congenital beginning. Certain it is that all authors are agreed that it usually commences to manifest itself in childhood, though this is not an invariable rule if the histories of these patients can be given credence as my own case shows. Virchow cites a case where a man suffering from molluscum had a grandfather, a father and brothers and sisters all of whom were likewise affected. It is said never to have been seen among the high classes by clinicians or private practitioners so far as recorded evidence goes. The true cause is unknown.

There is a difference among pathologists as to whether the beginning of the neoplasms is in the connective tissue of the corium, in the connective tissue framework of the fatty subcutaneous structures, or the connective tissue of the walls of the hair follicles. Von Recklinghausen regards it as a fibroneuromata developed from connective tissue surrounding the fasciculi of the nerve fibres (the endoneurium), and the neurilemma is only secondarily implicated. Hardaway confirmed this by one necropsy, and others allege that this condition is always found postmortem. The nerve fibres themselves are unaffected save by pressure and are never degenerated. Smaller tumors of the skin sometimes allow nerve fibres running through them while the larger ones do not, and it is reasoned that this is because in the ones of older growth absorption has caused disappearance and connective tissue (fibrous) then predominates minutely, the stroma of these neoplasms shows intimately interlacing fibres holding in their interstices a whitish or yellowish semi-fluid material which can be squeezed out by firm pressure, and it is the final absorption of this material which gives the soft consistence and empty-purse feel to the individual tumors.

Dr. Taylor, of New York, directs attention to an occasional manifestation of molluscum following injuries, which has likewise been noticed by other writers, and which he explains on the hypothesis of nerve injury thus corroborating and emphasizing Atkinson and Von Recklinghausen in their neurotic theory of the origin of all molluscous growths.

As to the tendency of these tumors, it is worthy of note that spontaneous involution has happened in rare cases but so infrequently as to be more a matter of curiosity than of clinical moment. Generally the prognosis involves a gradual increase in size up to the uncertain limit already referred to, and numerically they multiply slowly from time to time. This increase is particularly liable to be hastened about the periods of puberty, pregnancy and the attainment of adult age.

Diagnostically the affection is one easy of discrimination even by the novice. Its multiple tumors of indolent character and without special subjective annoyance, of long persistence as a general thing when first presented before the physician, often dating back to very early life, its peculiar flabby empty bag feel, and the pedunculated aspect of some or all of the numerous tumors mark it distinct from all other skin affections. From Molluscum Epithiale, it is known by the absence of a characteristic central depression inseparable from that disease, or if there be a central comedo it is readily expressed, such neoplasms are in

or on the skin which is tightly stretched over them, not subcutaneous as is fibroma. Then, too, in fibroma the integument seldom presents any abnormal hue. Multiple sarcoma is sudden in its onset, generally in adult life, and often pigmentated. Lipomata are flatter, almost never pedunculated, and lobulated distinctly, as well as numerically not multiple. In sebaceous cysts the contents are easily squeezed out leaving them entirely empty. Multiple true neuromata are exquisitely painful and hyperæsthetic.

The treatment is simple to consider. It is practically wholly operative, notwithstanding that Fox advises, and avers his own success with acid nitrate of mercury to the small tumors and this combined with the use of the ligature to larger growths. But the knife or galvanic therapeusis are really all we have to aid us of reliable measures. Electrolysis sometimes succeeds, perseveringly resorted to, and is specially applicable to the facial region where cicatrices are undesirable, the cathode being used to the growths. In larger tumors galvano-causty is desirable when applicable at all by reason of their excessive vascularity and resultant hæmorrhage under the knife. Other plans of treatment have proved utterly useless and mean only a waste of time with ultimate disappointment.

Now, briefly, the salient points regarding the case. It is not such a startling one as to its array of great numbers of neoplasms as many others which have been pictured by various writers of text-books on skin affections, but it is a well marked one even in this particular and the photographs will speak for themselves. The patient, J. B., hails from Bledsoe County this state. He is 5 feet 2 inches high, stunted in stature, as most of these patients are. Weighs 115 pounds. Age 33 years. Spare of build and dirty in appearance. Skin abnormally oily with tendency to seborrhœa oleosa. Flesh firm and natural, palms of hands show that he labors hard and continuously. Certainly is not an invalid as to general health if present physical appearance count for anything. Mentally he seemed to be a fair average of his class, though not by any means bright. The photograph was taken at my request July 8th of last year, with the patient wholly stripped except a towel to humor natural modesty.

The history given by this party must be taken with a grain of allowance, because of the fact that he is earnestly desirous of securing a pension from the Government on account of his affection and therefore the date of appearance of this eruption is given as 28 years ago—at the age of 25, you see—and while he was a prisoner in Andersonville. He attributes it to a precedent attack of scurvy, and alleges that the tumors appeared in large numbers all at once, which is hardly credible in the light of common history of these attacks. He is likewise emphatic in his averment that it produces great, even excessive, discomfort by pruritus, which is not the rule in such cases. The tumors are not very large, but numerous, though not nearly so much so as many of the figured plates exhibit in the works already mentioned. The reliability of his statements you can form your own conclusions upon when you allow for his relation to the prosecution of a pension claim based on disabilities caused by army service. Further than his picture and history, I can give you no light touching the case as it has had no treatment from me, nor is it now under my observation. But applying to it the general rules governing these manifestations we should conclude as a probability that this dermal trouble began in early life—likely in childhood—and will continue with possible slow increase as long as he lives, without great inconvenience except as regards its cosmetic effect which to him I presume is not a factor that would count very far. He denied its existence, of course, in any other member of his family of the present or past generations, and I had no way to verify his assertions.

HEMIHYPERTROPHY.

Möbius (*Münchner med. Wochenschrift, 189, No. 44,*) reports the case of a boy fourteen years of age, whose parents were neurotic. The skull was symmetrical; the left cheek larger than the right. The left extremity in all parts was stouter and firmer than the right. Sensibility and reflexes were normal and equal on both sides. The hypertrophy was looked upon as a pathological change. It is worthy of note that the vaso-motor disturbances of the skin were the greatest over those parts which were not hypertrophied.

TWO CASES OF DISLOCATION OF THE END-BONE OF THE THUMB.

By J. S. WIGHT, M. D.,
PROF. OF OPERATIVE AND CLINICAL SURGERY AT THE LONG ISLAND COLLEGE HOSPITAL, BROOKLYN, N. Y.

Dislocation of the end-bone of the thumb is of much interest and importance to the surgeon for the following reasons: The injury is rare; it is not easy to treat; a disabled thumb is more or less serious; and perhaps we do not know all about this injury, since systematic writers have not considered it fully. Two cases of dislocation of the end-bone of the thumb have recently come under my care: it seems to me that they deserve reporting.

Case 1.—Inward dislocation of the end-bone of the left thumb.—M. B., a laborer, age 50 years, Jan. 26th, 1892, was standing near a ten-foot high pile of bags containing rice, when one of the bags fell upon him and knocked him down, injuring his left hand and cutting and bruising his face. He was brought to the College Hospital soon after the accident, where I examined him. He said he struck the end of his left thumb upon the floor planking of the dock. The thumb presented the following appearance: The end-bone was adducted and bent inward; the base of the bone was prominent on the inner aspect of the thumb; it was carried slightly backward, but not enough to make it a backward dislocation; the head of the middle thumb bone was projecting under the integument of the outer aspect of the thumb; the end of the thumb was inverted toward the index finger; there was marked immobility at the seat of the last joint of the injured thumb. There was an inward dislocation of the end-bone of the thumb, and the patient complained of severe pain when I made an attempt at reduction. The tendons of the flexors and the extensors were carried away from the head of the middle bone, and the base of the end-bone had torn the capsule and escaped from it; the outer aspect of its base was resting against the inner side of the middle bone. I did not think it expedient to attempt reduction without anæsthesia for two reasons: under anæsthesia I would be more apt to succeed; and in case of failure, my patient would be ready for an operation.

Reduction.—After anæsthesia I seized the end of the thumb, my index finger grasping the dorsum of its base and my thumb pressing upon the palmar aspect of the dislocated bone; I bent the end bone over backward so as to meet the next bone at a right angle, and at the same time pushed the base of it toward its normal position; the projection on the side of the base of the bone, by means of rotating it, engaged in the rent of the capsule; and then by pressing firmly and carrying the bone outward the reduction was brought about with a "click," and as this movement was completed the thumb was straightened out. The forearm, hand and thumb were placed upon a wire-cloth splint made in the form of a trough. The case did well and good motion of the end-joint of the thumb was recovered.

Case 2.—April 5th, 1892, Mrs. B. was sent to me by my colleague, Prof. Skene. She said that she fell down stairs three weeks before with a baby in her arms, and injured her right thumb. The end of it was projecting directly backward, and the doctor who saw it pulled it out straight, and told her to poultice it. When I saw her the thumb was still very painful, and showed the characteristic deformity of a backward dislocation of the end-bone.

Reduction—I was assisted by Dr. Welty, the family physician and Drs. Cochran and Wm. Skene. The patient was put under the influence of ether. Then I pushed the end-bone of the thumb upward and backward to a right angle with the next bone; next I hooked my index finger around the base of the dislocated bone; while I pressed against the palmar aspect of the thumb of my patient. I pulled with my index finger as forcibly as possible; in a few moments the base of the dislocated bone slipped over the head of the next bone; at last I flexed the end-bone of the thumb, making pressure over the dorsum of its base, and at the same time making pressure backward upon the head of the middle bone. The two bones had to be held in place until the splint was applied. During reduction crepitus was felt, showing that the edge of the articular cavity of the end-bone had been slightly fractured. The splint was made of wire-cloth, and embraced the thumb, the wrist, and part of the forearm. There was a

constant tendency for the end-bone to get out of place again, which was not easily controlled even by the splint. Firm extra pads were applied: one over the dorsum of the base of the end-bone, and the other on the palmer aspect of the head of the middle bone. Every three or four days I made passive motion of the end-joint of the injured thumb. While the bone appears to remain in place well enough, there is a tendency to anchylosis. Nor do I believe that the patient will ever regain the entire use of her thumb, yet it will be a good opponent of the fingers, and be very useful.

POST-DIPHTHERITIC PARALYSIS.

By FRED W. D. EVELYN, M. B., C. M.

CLINICIAN MEDICAL DEPT. UNIV. CAL. AND CLINICIAN DISEASES OF CHILDREN SAN FRANCISCO POLYCLINIC.

The subject of post-diphtheritic paralysis is one that must ever prove attractive, containing, as it does, factors not merely of diagnostic and immediate prognostic value, but conditions which can not be ignored in the deduction of final or ultimate prognosis. And I question if we are justified clinically, whatever we may be pathologically, in considering diphtheria, or any of its so-called classical concomitants, as distinct, isolated, well-defined morbid processes, constant in their manifestations or lending themselves to a uniformity of intensity in their effects directly proportioned to the extent or the locality of the areas primarily involved.

Paralysis, it is true, does not, as a general rule, make its appearance until the disease, or, perhaps, more correctly, the more evident indications of its presence, are on the wane, or passed away altogether; but this fact, to me, does not seem sufficient to warrant the conclusion arrived at by some, that post-diphtheric paralysis is simply an integral and essential stage of the disease. To do so would be equivalent to saying that those cases (leaving out those severe examples which are too rapidly fatal) not exhibiting paralytic phenomena had been aborted, and did not pass into the third, or final stage. I prefer, rather, to consider paralysis as a side issue, a resultant, and not a definite phase of the primary disease. Even in those cases where there has been an absence of marked symptoms, where, for example, a supposed simple catarrhal pharyngitis, or nasal voice, are followed by the familiar symptoms of paralysis, I conceive an antecedent diphtheria, so modified in its manifestations that its true character was not surmised until a super-induced condition, viz., paralysis, furnished an interpretation of the true character of the disease.

The paralysis, in the early stage, at least, has some features which assist in its differentiation, not merely its relation to an attack of diphtheria; but the character of mutability, shifting from one area of involvement to another, this peculiarity being altogether independent of any alteration in the other evidences of the presence of diphtheria; in other words, its manifestations are discrete rather than progressive.

It is also to be noted that when it simulates more profound organic lesions its phenomena in their order of appearance are exactly reversed; e.g. bulbar crises in organic lesions appear late in the attack, in diphtheria early, and, furthermore, exhibit a tendency to sudden onset and marked intermissions.

I have noted also that, with the exception of palatine paralysis, motor involvement is in excess of sensory, in palatine both are equally intense. In recovery, however, sensation, in most cases, takes the precedence of motor improvement;—and, again, I have noted that voluntary contractions are directly proportioned to those artificial contractions produced by electrial stimuli, a point of interest, differing in its relation from the phenomena observed in the recovery of those forms of paralysis which have demonstrated the qualitative changes known as the "reaction of degeneration," where the power of producing voluntary contractions is regained before contraction can be elicited by either the interrupted or continuous current.

The order of the appearance of paralytic symptoms is not always constant. In a few cases observed the loss of the tendon reflex, which is generally considered the earliest symptom, was preceded by a nasal voice with well-marked palatal involvement; once recognized its duration is more persistent than other symptoms, except in those cases where permanent paralysis is established, when the knee reflex may be ultimately returned to normal action.

Again, in many cases, we have to recognize a condition of general, or, more correctly, a multiple paralysis. One of my cases exhibited this in a marked degree; a double strabismus; lower extremities useless; muscles of trunk and neck so involved that the body was limp and the head moved after the manner of a universal joint; organic reflexes, with the exception of deglutition, which was difficult, were unaffected; hearing normal, and actual vision only modified by the presence of the strabismus; but there was a complete absence of any trophic changes. This latter point is worthy of emphasis as I consider it an evidence of the early stage of paralysis, *i. e.* a stage prior to any actual quantitative changes, and, therefore, of important prognostic value, as, in their absence, a very favorable prognosis may be given. This naturally leads up to the consideration of the morbid changes manifested, which consideration lends itself to a natural division, or, perhaps, I should say that, clinically reviewed, we should recognize two distinct stages, and two separate tissues, (nerve and muscle), involved.

The recognized fact that in many cases the sudden disappearance of the paralysis in one group of muscles, to re-appear in another, would scarcely admit of the conclusion that an actual alteration, a pathological condition, had been induced, either centrally or peripherally, but simply a functional perversion without any molecular or structural deviation. We have, in short, a transient cause producing a transient effect. Let, however, mere functional perversion become persistent, then irritation will become inflammation, and precipitate pathological conditions which in turn can *per se* inaugurate changes not essentially dependent upon the the primary cause. This sequence of events is readily admitted in other forms of paralysis; e. g. a progressive muscular atrophy continuing to extend long after the exciting cause has ceased to exist, and I think progressive post-diphtheritic paralysis warrants a like deduction, whether the cause acts from a central or a peripheral origin.

The origin of the paralysis as *centric* has been advanced, but that is not easily maintained when we note that the ramifications of a nerve trunk are not equally involved, some fibres, indeed, maintaining a perfect normal function; again, it is difficult to conceive a lesion so selective in its action that nerve centres closely adjacent are not, in a measure, at least, correspondingly affected.

As to the peripheral degenerative changes stated to be observed in certain cases, whilst admitting their existence I am in favor of considering them secondary—super-induced conditions called into existence but not further dependent upon the primary excitant for their subsequent progression—for observations made at this stage reveal, not a simple neuritis with a concomitant interstitial inflammation, but an actual necrotic degeneration, affecting the component parts of the nerve structure.

The second tissue to be considered is the muscle itself; its fibres are found to exhibit cloudy swellings and fatty degeneration, and, in some instances,—especially when the muscle is in contact with a super-imposed diphtheritic deposit—the appearance presented suggests a penetration of cellular elements, either leucocytes or modified blood corpuscles, forming foci capable—as it were—of producing necrobiotic changes in the tissues which they invade. This may possibly account for the slough-like character assumed by traumatized areas on which a pseudo-membrane has formed.

The more vital forms where the cardiac, or cardio-pulmonary system become implicated I have not had sufficient opportunity to investigate,—but I would favor the idea —in case of cardiac paralysis—that the action took place reflexly, through the plexus of innervation, and was not analogous to the asystolia as found in dilated heart or mural degeneration.

Reviewing these data I feel justified—to a degree, at least, in endorsing the theory that paralytic changes are primarily due to a morbific factor—a ptomaine—generated by the specific productant of diphtheria, and at first instituting a profound functional disturbance,—which disturbance ultimately reaches a stage of independent activity, establishing a clinical line of demarcation, if you permit the term, not demanding, prognostically or therapeutically, undue consideration of the original cause.

Reaching this stage the ultimate prognosis must be based upon the actual extent of the neurotic changes elicited by the usual methods of testing a nerve case, and treated as the symptoms demand. Thera-

peutic agents will not now require to be the so-called specifics for diphtheria, but must appeal to the condition actually present—asthenia or anæmia, as it may be.

During the stage of simple functional disturbance, or ptomaine activity, we are called upon to treat the diphtheritic poison as the active cause, and in measure as we prevent tissue irritation we reduce the tendency to secondary complications.

A clinical division such as this will, I presume, be beneficial, and in endeavoring to follow its suggestions we shall avoid much of the disappointment experienced in the indiscriminate treatment of diphtheritic sequelæ. I shall not now refer to treatment in detail, for such a clinical division as the above sufficiency suggests the treatment required.

MECHANICAL TREATMENT OF CHRONIC RHEUMATISM.*

L. P. WALBRIDGE, M. D.
DECATUR, ILL.

You have all had come to you from time to time for relief cases of chronic rhumatism. By rheumatism in its widest sense I mean shifting pains in the joints, the parts surrounding the joints and in the muscles. These poor sufferers come to us in various phases. In a few the nutrition and general health of the patient seem not to be materially altered, but in a great majority of cases there will be found altered nutrition with its resulting change in the blood, nervous system and muscular tissues. Rheumatism affecting the muscles in its various locations upon the body is amenable to treatment by remedies both local and constitutional. Those remedies that have an alterative process upon nutrition seem more potent for good. For instance, the salicylates changing the quality of the blood; iron a constituent of the blood to the red corpuscles of which it gives color; morphine and atropine increasing the heart's action and sending the blood with greater force thereby setting up molecular changes; strychnine, alchohol, arsenic, antipyrin, ammonia, guaiacum, iodide of potassium, sulphur, cod liver oil, counter-irritants, friction and food consisting of all these, setting up metabolic changes altering the blood, nervous system, and general nutrition of the parts. Sometimes a single drug of this list, or a combination of some of these, will act in some cases admirably, but in some cases this plan of treatment must be continued for some time until there is brought about an altered condition existing either in the blood, nervous system or muscular tissues, each case peculiarly adapted for a certain line of treatment. But undoubtedly we will have cases come to us that will seem to resist all medication, then we will have to devise some mothod by which we can cure our patients or they will slip out of our hands and go from physician to physician and at last become discouraged and give up all hope of ever becoming well. The class of cases that will resist all medical treatment is that affected with chronic rheumatic arthritis which presents the clinical features of pain, impairment of function in joints, muscles, contraction of tendons, swelling and adhesions. These cases are not benefited by any form of treatment other than that relative to the joint. Then what is the proper method of treatment and indications for treatment? They are to relieve pain, promote absorption, hasten the removal of adhesions and set up molecular changes in the surrounding parts. Only by mechanical means including calisthenics with its healthful exercise of body and limbs can we then hope to break up existing adhesions, to smooth the roughened articular cartilages, strengthen the contracted tendons and nerve tissues and restore the joint to its former suppleness. First, by a process of stroking and kneading in a centripetal direction, stimulating the lymphatics and venous currents and surrounding tissues to greater activity, carrying the lymph with greater rapidity toward the centre. By these means the lymphatics and circulating system are stimulated, setting up changes in the nutrition, causing healthy activity in the parts. In cases where there is perceptible defective nutrition constitutional remedies with dietetic medication must be employed. I will give you a few cases that came under my care. After exhausting all other methods of treatment, the patients becoming tired of treatment and threatening to go to some springs for relief, I began mechanical treatment by manipulation of

*Read before the District Medieal Society of Central Illinois at Pana, April 20th, 1892.

parts, stroking, kneading with active and passive moments.

Case 1.—Mr. H. J.., a day laborer, age 46, came to me in April of last year. Complained of severe pain in back and right thigh down to the knee. He was scarcely able to walk by use of cane, could not raise foot to stair steps without the help of both hands grasping and lifting it up. He said his right leg had troubled him for two years and had constant pain on posterior part of thigh. While seated he could not raise himself without the aid of his cane. While he was seated he could not raise his foot from the floor with leg extended more than one foot, it causing him severe pain in posterior part of thigh in knee and hip. There was great sensitiveness at the point of exit of sciatic nerve and at different points along its course and in popliteal space. Knee slightly flexed and steps on toes. Patient well nourished and otherwise in good health. After faithfully trying medicinal means without any benefit, I began mechanical treatment by kneading and stroking of parts, all kinds of movements being very painful to the patient. It being very difficult for patient to raise foot or thigh, I laid him on the table and began the simplest movements, as raising the affected member as high from table as possible, desist when the pain becomes severe, for in these cases flexion or extension are very painful in hip and knee joints. As the distance in raising the foot is increased so will the pain become lessened when the patient is up and about. Rest patient and try again increasing the height each time. By the manœuver the sciatic nerve and the muscles and tendons are put upon a stretch, for in most cases these tissues become shortened, their physiological action impaired, and by our endeavor to put these tissues on a stretch can we hope to bring back their normal physiological action. Alternate by stroking posterior part of thigh in a centripetal direction and kneading the muscles, having for its object the alterative changes that will follow in muscles and nerves improving the circulation and stimulating lymphatic resorption. Change movements by letting patient step over some object, say one or two feet high. It is a good plan to direct patient, for by partial disuse the cerebral powers causing the requisite contractions seem to be lost, so by directing patient this lost power is gradually restored. Then direct patient to bend knee on floor raising himself up several times. All of these movements can be increased each day. I then instruct patient to walk properly stepping on heel instead. By this manner of walking all the parts are kept on the stretch. These various exercises should be gone through every day. The object is to keep the parts active and giving patient all the movements you can employ. This patient had been affected about two years. When under treatment eight weeks was discharged cured. More than a year has elapsed and he has had no return of rheumatism. The daily exercises lasted about twenty minutes, long enough to keep parts thoroughly exercised and not exhaust patient. In these cases the physician will become tired, and he will find that if he does his full duty it will be work for him as well as the patient.

Case II. Mrs. H. K., aged 36, sent for me to go and see her at her home in June of last year. She came to the door on crutches. She said that she had been troubled with her feet and right knee for 18 months and had been compelled to use the crutches for the past ten months. On examination I found both ankles swollen, would pit some on pressure, movements entirely lost by her own effort, and any effort in making active or passive movements caused her so much pain that all such efforts were delayed for some days. Right knee joint affected with constant pain, synovial exudation quite abundant, could not put knee on extension the pain was so sickening. The general nutrition was impaired. The heart was in proper position, and I could distinguish no murmurs, but the first sound of the heart was weak. It seemed to beat no stronger than second sound. It was easily excited and she complained of being faint at times and thought her heart would stop beating. For her heart I put her on a mixture of tr. iron, quinine, strychnine and magnesia sulphate with a vehicle of glycerine and water, to be shaken and taken three times a day in plenty of water. After taking this mixture for a few days she began to improve in strength, her heart increasing in force, but her ankles and knee remained unchanged. I began by using hot and cold water on parts, alternating until the sensitiveness of parts was diminished, then gradually beginning by stroking and

manipulating parts, followed by active and passive movements. This plan of treatment was continued for two weeks, increasing the movements each day at which time I took her crutches from her and told her not to use them any more, but to walk without them and try to walk properly. Her strength in ankles gradually returned and the swelling in ankles subsided. The active and passive movements were continued for six weeks, and at that time she was well enough to stop active and passive movements. The constitutional treatment was continued for two months.

Case III. Mr. J. Mc K., a plasterer, age 46, sent for me in April of last year. I found patient confined in bed, could not turn over in bed without help. On examination I found some tenderness in loins on either side of spine in lumbar region, but no change of structure was apparent. I prescribed for him quinine and sodium salicylate, two grains of the former, and four of the latter, to be taken every two hours until the physiological action of the drugs was produced. This followed after they had been continued for ten hours, but no relief of the symptoms followed their use. I followed by using phenacetine in ten grain doses every three hours until the effect of the drug was produced. This in a measure reduced the pain, but the weakened condition of the heart that followed and general prostration compelled me to to discontinue the drug, and resort to stimulants. I immediately administered a hypodermic of morphine and atropine, which was followed by improvement of all symptoms, but after the effects of the hypodermic had passed the pain returned with as great a force as at first.

Three days had now passed and my patient was no better. I then resorted to mechanical treatment, first by kneading muscles of back and stroking them. After I had proceeded in this manner for a few minutes my patient could turn over in bed, and said that he was feeling better. The next day I got patient out of bed and began active and passive movements by having him stoop down and raise up several times, then bend backwards several times. From this time patient kept on improving and remained up. It astonished me to see how fast this patient improved after active and passive movements, suffering with such a severe lumbago.

Case IV. Mr. J. D. A., machinist, aged 47, came to my office last October, walking unsteadily by use of cane, complained of pain in back and right hip and thigh. Said he could not lift foot so he could walk well. On examination I found tenderness over exit of sciatic nerve and in popliteal space, knee slightly flexed, stepped on toes. While seated, when I lifted his foot he cried out that he came "to be cured and not killed." I explained to him that he must make up his mind to bear a little pain and that he would get well. I laid him upon the table and began by lifting foot as high as possible, stroking and kneading hip and thigh, gradually increasing height. I then changed his movements by having him walk and step over some object increasing height. I instructed him to kick as high as he could several times a day with this leg and keep it active for it needed activity and not rest. I took his cane from him and instructed him not to use it any more. I increased all movements as I had in case one, and after three weeks' treatment patient was discharged cured.

Case V. Mr. C. A., merchant, aged 66, came for treatment in March. He complained of pain in right shoulder, arm and fore arm at night so bad that patient could sleep only by the use of a hypnotic. Examination revealed tenderness at points on shoulder, on inner surface of arm along course of median and musculo-cutaneous nerves. The grip of hand was so perceptibly lessened in right hand that patient could not hold a glass of water. This condition had lasted nearly two years and was constantly growing worse. I began by stroking, kneading and manipulating muscles of shoulder, arm and forearm, then directed patient to extend arms over head, which was very difficult for him to do. He could not fully extend arm, it gave him so much pain. I directed him to strike up using all the force he could, first with one arm, then with the other arm, then directed him to strike out from body, then strike down, then throw arms backward as far as possible. By degrees these movements were increased in force and became more easy for patient. I then gave him weights to hold out, increasing the weight until patient could hold out as much with one arm as with the other. All of these movements were kept up every day for four weeks when patient could sleep without pain. This patient had re-

sorted to medicines for more than a year for the relief of this cervico-brachial neuralgia without any benefit. To give more cases will make this paper too long and tiresome. These cases being unusually severe ones will illustrate the method of treatment and its results, contradicting the old teaching that these cases need rest.

What physiological effects are produced? The primary effects are upon the joints, muscles and nerves. In the joints stiffness, adhesions and contracted tendons are broken up and got into a proper condition for absorption. The secondary effects are produced upon the circulation and lymphatic system. The muscles and nerves are surely elongated, heat must necessarily be evolved by the manipulations, changing the molecules of the muscles from an inactive to an active state, causing internal work, setting up molecular changes in all the surrounding tissues. The circulation and lymphatic system are stimulated. By stroking in a centripetal direction the lymph and venous currents are increased, altering the whole process of nutrition. The waste material is carried away by increased action of the lymph and circulation, and new nourishment is more readily carried to all parts, feeding them and enlivening the whole organism.

HYPNOTIC EFFECT OF WARM BANDAGES

Warm baths, as is well known, produce a calming effect, and tend to bring on sleep, and Alldorfer has attempted to apply such a method in patients where a sedative effect is desired and yet where a bath is inapplicable. His method consists in wrapping the lumbar region and belly with linen cloths soaked in warm water, and then covering them with oiled silk or rubber cloth, so as to prevent evaporation, while the whole is kept in place and loss of heat prevented by a flannel cloth. This procedure is of ready performance, and the author says that by this simple means he has obtained the most astonishing results in the treatment of insomnia. By dilating the large vessels of the intestinal tract, by the warmth applied, a condition of anæmia of the brain is produced, favoring sleep. These large intestinal vessels have very properly been termed the waste-gates of the circulatory system.—*Jour. de. Med. de. Paris.*

Society Reports.

THE CLINICAL SOCIETY, OF LOUISVILLE.

Stated meeting, April 19th, 1892.

Dr. P. Guntermann, President, in the Chair.

BOILS AND THEIR TREATMENT.

Dr. W. C. Dugan: I shall not apologize for selecting the unpretentious subject of Boils and their Treatment for this evening's discussion, for, be it remembered that no field of minor surgery has been so ignored for the more attractive themes of major surgery. Text books and works on special surgery are given over largely to abdominal, cerebral and thoracic diseases, and give the subject of boils a mere passing notice, or else forget it entirely. While the journalist discusses at length appendicitis, cerebral localization, operation of microcephalus, pelvic and other forms of major surgery, and rarely finds a moment to review one of the most common of all surgical diseases, that of boils. Another reason for selecting the subject, is, that it is one of uniform interest, alike to the surgeon and general practitioner. Before discussing the treatment of boils, which is the real purpose of my paper, I shall first invite the Society to a brief review of the pathology of the disease. We hear patients say that they are the product of bad blood, to humor of the blood, to the season of the year, etc., and we are not slow to criticise them; but they are as nearly right as the teachings of some of our works on surgery, in which we find that they are caused by certain forms of kidney disease, diabetes, etc., etc. While they are met with oftener in patients with bright's disease, diabetes, etc. than in healthy subjects, we must not jump at the conclusion that these constitutional conditions are the cause. Not infrequently we have patients say that Doctor so and so told them that their successive crop of boils was due to high living, bad digestion, etc. Yet, you can look back over your experience and recall many cases of bright's disease, diabetes, indigestion, without developing these troublesome pets, about which we hear so much of their depuratory action, purifying the

blood, and their value of $5.00 each, in the spring of the year.

The relation of the conditions above mentioned to boils is indeed rather intimate, but they are not the essential causes by any means; they are the accessory causes and act by simply lowering tissue resistance, and thereby make way for the real cause of the disease. If pus from these foci of inflammation be carefully examined, it is always found to contain certain forms of vegetable life, which belong to the family of pus-forming microbes. The numerous infections from patient to patient, or patient to surgeon, is so frequent, that the infectious character of the disease is hardly to be questioned. But that, to the minds of the hyper-skeptical, is not sufficient to prove the microbic origin of the disease. But since the disease can be produced by the inoculation with pure culture, there is hardly room to longer question the microbic origin of the disease. The same kind of pus-microbe causes all forms of suppuration in boils and carbuncles, which is in fact but a number of foci placed very close together. I am surprised to see in modern works on surgery, the old idea still adhered to regarding the cause of carbuncles. They are not caused by the anthrax bacillus which is found in the malignant pustule, but the staphylococcus and streptococcus. *Treatment*: The common way of treating boils is but little better than leaving them to nature unaided. We are apt to say to the patient, go home and put on a poultice, and come to see me in the course of a day or two. The patient obeys instructions, and how is it done: 1st. He does not know how to make a poultice. He feels that the poultice has some specific action, entirely unmindful of the fact that its virtue is in the heat and moisture. He applies a little half-cooked poultice and goes to bed. It is cold by the time it is on. The next morning it is taken off. If the patient could have done anything more conducive to the growth of the germs and the development of secondary crops of boils, I am unable to see it. The moisture of the poultice at or about the body heat is certainly the best condition for the growth of microbe life. Poultices as generally made and applied are absolutely harmful, and should be discarded.

I would not like to be understood as denying the relief of moist heat, which has a two-fold action; 1st it lessens tension and thereby mitigates pain, and if the heat be 104 to 110 F. as should be, it arrests the development of microbes. There is but one form of poultice to be relied upon, in my judgment, and that is hot bi-chloride gauze wrung out of boiling water and applied in a thick pad over the parts and extending some distance from the inflamed centers, covered with oil silk, rubber tissue, waxed paper or oiled paper. It has all the advantages of the old flaxseed poultice, without the objections. The moist heat is sure to give the patient much relief, by lessening microbic action and causing tissue relaxation.

Another line of treatment is the painting of parts with pure carbolic acid, tincture of iodine, turpentine or some other powerful antiseptic. It is found that this will abort a certain per cent. of the cases if done in time. But, since it seems settled beyond all reasonable doubt, that it is a microbic disease, it appears, that anything but applying the remedy directly to the focus of the disease, either by free incision and the application of antiseptics, or the injection into the tissue of the same, are less trustworthy and should be discarded.

The habit of waiting for pus formation is a bad one. Nature has by this time mastered the situation, and will soon get rid of the pus without aid of the surgeon's knife. I make it a rule to treat these cases of acute phlegmon, as soon as they come under observation, and the following plan has proven eminently satisfactory: Parts washed thoroughly and four per cent. solution of cocaine injected, which if not done carefully will give unnecessary pain. The solution should be placed in the deeper layer of the skin. It will be found that the tissue can be laid freely open after the injection without pain. Then a probe wrapped with some absorbent cotton saturated with pure carbolic acid, is applied to every part of the wound, pushing the probe out into the tissue to be certain that no part of the boil cavity escapes. Then the wound is packed with cotton saturated with the pure acid and some gauze dressing applied. The relief is almost instantaneous. The operation can be done without local anæsthetic. The acid, after the first few seconds, acts as an anæsthetic.

I have not found it necessary in all cases

to incise the phlegmon but just inject the pure carbolic acid into the inflamed tissue. I am much pleased with the injection and shall give it the preference until convinced that it is less to be relied upon, than the incision; but, so far, have not had a failure.

Dr. T. Satterwhite: I think the paper read is a very interesting and valuable one. I have not used a poultice for any purpose for many years, not even in pneumonia. I use fomentations with spongio-piline covered with oil silk, which I find to be much lighter, handier and cleaner than poultices. I have often opened boils in their incipiency, and have never found relief before the cellular structure has melted and suppuration taken place. It is something like whitlow—if you open before the structure is broken down, before pus has accumulated, no relief follows the opening. If the injection of carbolic acid is followed by cauterization with nitric acid, I think it is an exceedingly interesting and valuable suggestion. Its simplicity makes it that much more interesting to me, because we have very few suggestions on the treatment of these simple, yet common troubles.

Dr. J. M. Krim: I want to ask Dr. Dugan if he thinks it advisable to use the injection in all cases of boils, irrespective of their indurated condition.

Dr. W. C. Dugan: Yes, sir, sometimes it is necessary to make several injections.

Dr. J. W. Irwin: The treatment of boils for the most part, spoken of by Dr. Dugan, is original with himself, although the antiseptic treatment of boils has been broached for several years; but how to perform the antisepsis seems to have been a great problem in the treatment of boils. I think, however, that in so far as the pathology of the disease is concerned, that he lays too great weight on the microbe,—that cannot be the pathology of the disease, it would be an exciting cause, which gives rise to an altered condition of the tissue involved. I think that is probably what the doctor intended rather than to say "The microbe was the pathology of the disease." So far as the pathology is concerned, we all know that it is nothing more than the result of ordinary inflammation, having, according to later ideas, a microbe for its origin or cause. When boils first make their appearance, it is not common to have more than one, two or three at a time, but, if we produce undue pressure on these boils, or if we prick them we are very much more likely to have a crop of boils in the neighborhood of where the first one made its appearance, than if we had soothed them by proper applications. My experience with boils has been quite considerable, have recently had a case of a gentleman who had one-hundred and three boils consecutively on his body. The man had had severe nervous prostration for some time preceding the outbreak of these boils, and that condition of the system is one favorable to the production of that class of disease. This was not the only case nor the first one, where I thought I could trace the cause of the boils to a disturbance of the nerve centers. Whether due to wasting diseases, such as consumption, dysentery, typhoid fever, gastro-intestinal disorders, to diseases of the kidney, including diabetes, and Bright's disease, diseases of the liver, or of the other internal organs, I have found boils, generally speaking, most frequently to occur in cases where the nervous system was involved in some form of disorder, especially some form that had greatly impoverished that system. I have also found that boils occur quite frequently in persons suffering from disease of the bladder, enlargements of the prostate gland, and so on. Therefore, I have come to the conclusion that the true causes which underlie that class of disease are, as before stated, due to disturbances which lower vitality and weaken the nervous centers of the individual. So far as the microbic origin of the disease is concerned—I have seen mention of it a number of times; whether it is true, or not, I am not prepared to say—I assume that it must be true. One thing is very certain that the microbe has a better soil to do work where we have this kind of nervous disturbance.

As to the management of boils in incipient stages—I have never applied anything to the surface of a boil that arrested its progress, and, so far as I remember have never made use of anything in the form of a poultice that cut short the progress of a boil. I have had hot water applied, which is the domestic remedy, as hot as the patient could bear it, temperature of 212° and probably higher than the boiling point without the effect of arresting the progress of the boil; I have applied iodine locally, carbolic acid locally, and I have applied,

as Dr. Dugan states, antiseptics, after making an incision. I have applied carbolic acid in the wound, and have never been able to arrest boils, or furuncles, with any of the applications named. I have never found any single remedy as beneficial in the treatment of boils as arsenite of iron. In those cases where boils have occurred most frequently, I have found that unless some constitutional remedies were given, such as arsenite of iron, that my patient would have a great many boils before he got well. I have not found poultices to do very much good, except for their soothing effect. I have found, however, that as soon as my patient could be placed under the effect of arsenite of iron, the number of boils would very materially diminish. I have never tried injections as mentioned by Dr. Dugan, but see no reason why they should not be useful;—I fear for the most part, however, their use would be impracticable because very few people would be willing to have a needle introduced into the tender parts. I think we should have some regard for our patients' feelings. Whether boils are caused by, or the result of, some impurities of the blood, seems to be a question that is hard to solve. But, we do know that it is an uncommon thing for boils to occur in a perfectly healthy subject. It has long been believed that boils were a source of drainage to the system, but in my opinion they leave the blood in much worse condition than it was at first. I think a man is rendered more susceptible to other forms of disease, owing to the waste they cause.

I do believe that what underlies the majority of boils is some morbid condition of the nerve centers.

Dr. W. Cheatham: I see no reason why boils should not be relieved by incision, the same as periostitis, and our experience with periostitis is, that it is often permanently relieved by incision, and in many cases without the formation of pus. In considering the subject of boils, lately the question of sty has come up, and examination has shown that not only the acute, but the chronic sty to be microbic or parasitic in origin. Carbolic acid is used very largely about the eye; in a great many cases we abort abscesses of the cornea, or are supposed to, and relieve existing abscesses, by the application of pure carbolic acid:—We scrape out the ulcers of the cornea, thoroughly cleansing them, and apply carbolic acid well to the base with good effect.

Dr. P. Guntermann: Speaking of whitlow not being relieved until pus has formed,—the reason for that is, the periostitis is perhaps only confined to such an infinitesimally small place, that in making an incision you do not strike the whitlow, and, consequently, it is not relieved. Concerning the use of poultices,—I suppose a great many have discarded them by this time, that is, flaxseed poultices, using other preparations in the form of fomentations in preference to flaxseed; slippery elm, &c. The fact that one boil is followed by a crop of boils in the same neighborhood, would rather point to septic origin of the first boil, or, if not the real origin of the first boil, at any rate that there are microbes at work, and spread very rapidly, otherwise you would not have so many boils near the first one, you would have them on other parts of the body. The treatment spoken of by Dr. Dugan is nothing new, as the same line of treatment has been followed for at least twenty-five or thirty years.

Dr. T. Statterwhite: Where boils are isolated, or just confined to one locality, is it not very often due to diseased follicles? Now, in patients who are suffering from an aggravated form of acne, we often find good sized boils. I have always understood that these were due to a closure of the mouth of the glands, from disordered and pent up secretion of them, so causing enlargement and suppuration.

Dr. W. C. Dugan: In regard to the pathology of boils, which is but the pathology of infection—there is no form of infectious disease known to-day, but what is microbic. We used to speak of the pathology of inflammation being caused by trauma, bruises, etc., etc.; they simply open up the unions through which the various microbes enter the system. I think it is now accepted by all modern pathologists, that the essential cause of every form of inflammation, so for as is known, is microbic. It is quite true that dysentery, diseases of the liver and kidney, and so on, lower the physiological resistance and so produce favorable conditions for disease. We have two great forces continually acting; one is to build up, the other to tear down. If the building up process is weakened by certain constitutional disease, as a matter of course, it invites disease. The

resistance that we all have against disease is overcome by certain microbes. The healthy cells of our bodies have what is known as phagocytic action, which means that they have an affinity for germs and destroy them. Now, if this action by disease is weakened, abscesses, boils, etc., take possession.

In regard to crushing boils—that is a point which I intended to mention. If we take a boil between our fingers and crush it, (a method practiced by some to get the core out,) it is quite true that we aggravate matters very decidedly: The reason is this, we tear the membrane which nature has thrown out to prevent the microbe invading the surrounding tissues. When this membrane is ruptured, it allows the microbe to invade the tissues surrounding it. Any patient that has had a nervous disease, who loses to a certain degree his personal hygiene, who neglects bathing, who neglects the changing of his linen, lays himself liable to this disease. Constitutionally, the treatment of all boils is good in so far as it increases our resistance against disease, no further. Probably the most important treatment is the prophylactic treatment. Whenever patients have one-hundred boils, fifty boils, or, boil after boil, I take it that we could prevent this in quite a per cent. of the cases, provided we have a patient that we can control. We should instruct this patient to take a bath often, using the very best soap, cleansing the skin thoroughly, then taking a bichloride of mercury bath. In addition to this his linen should be changed often. If he has a boil on the back of his neck, his coat should be discarded for another.

Dr. J. W. Irwin: According to the latest ideas of the subject, Dr. Dugan has stated exactly what is now the order of the day. I endorse his remarks so far as that goes, but, from personal experience, I am not able to quite agree with all he says.

Dr. W. C. Dugan: I would like to report one or two cases: Some time ago a young man, a dentist, in extracting teeth, came across one that was septic, and some of the pus lodged in his moustache. He called at my office a day or two afterward, with his lip very badly swollen. I suggested to him that I shave off his moustache, and open the lip thoroughly. He said he would willingly undergo any torture to save the moustache, so I decided to inject some carbolic acid. I did not use any cocaine, and injected about twenty minims of pure carbolic acid into the swelling. He left the office, came back in about an hour and said he had been suffering quite a little pain, but was perfectly easy then. I told him if he suffered any more pain that afternoon, to call back and I would make a free incision. The next morning I was very much pleased to find that the swelling had subsided more than one-half, and in forty-eight hours it had disappeared entirely. There was no further pain and no suppuration. I want to say that the injection treatment is not new to me.

Another young man came to my office a few days ago, having a boil on the back of his neck. Said he was a clerk at the L. & N. R. R. Offices, and had been laid up for several days on account of the boil. I laid it open thoroughly after using cocaine, then applied carbolic acid, as described, taking great care to see that it was passed to every part of the boil. The next morning he went back to his work. The operation gave him no pain, and he says he slept that night for the first in three nights.

EHRLICH'S REACTION IN TUBERCULAR CHILDREN TREATED WITH KOCH'S LYMPH.

It is known that Ehrlich's reaction may also occur in the urine of those suffering from tuberculosis. As tuberculin causes an exacerbation of the tubercular process, experiments were undertaken by Amiel Feer(*Jahrbuch für Kinderheilkunde*, Vol. XXXIII, No. 3.) to determine whether or not the sulphanilic test would respond more frequently in those who had been previously treated with Koch's lymph. Seventeen children suffering from tuberculosis of the bones, joints and lymph glands gave the reaction in only two cases, while fourteen marked reactions were obtained after the lymph had been used. The earliest time in which the reaction occured was in five hours, reaching its height in twenty-four hours, and extending at times to the third and fourth days. It seems to bear a direct relation to the height of the temperature. That the reaction may not positively occur is shown by the fact that it failed in cases which were undoubtedly tubercular. The author considers that this reaction occurs more readily in children than in grown persons.

Selected Formulæ.

SORE NIPPLES, CHAPPED LIPS, HANDS, ETC.

℞ Cocaine hydrochlor.....gr. i.
Vaseline.....ʒ i.
M. Sig.—Apply ad libitum.

LEG ULCER.

Dr. Weismueller praises the action of a dusting powder thus composed:

℞ Acid. salicyl.....ʒ iv.
Acid. borici.....ʒ ij.
Zinci oxidi.....ʒ ss.
Amyl.,
Talc.....āā ʒ v.

PEDICULI PUBIS.

℞ Hydrarg. ammoniat.....gr. xxxv.
Balsam. Peruvian.....ʒ j.
Olei petrolei.....ʒ ijss.
Lanolini.....ad ʒ viij. M.

HEMATEMESIS FROM GASTRIC ULCER.

℞ 1. Powd. acetate of lead.....gr. iii.
Hydrochlor. of morph.....gr. iss.
White sugar.....ʒ iss.
Mix and divide into six doses. S.—One every two hours.

℞ 2. Powdered tannic acid.....gr. x.
Powdered opium.....gr. ii.
White sugar.....ʒ iss.
Mix and divide into six doses.
S.—One every two hours.

—Bamberger, *Union Médical.*

FACIAL ERYTHEMATOUS LUPUS.

Brocq recommends the following formulæ in the local treatment of this disease:

℞ 1. Salicylic acid.....0.50 gramme.
Lactic acid.....0.50 "
Resorcine.....0.75 "
Oxide of zinc.....2.00 grammes.
Vaseline.....17.00 "
M. Sig.—Locally applied.

℞ 2. Salicylic acid.....1.00 gramme.
Pyrogallic acid.....2.00 grammes.
Vaseline.....20.00 "
M. Sig.—Apply at night.

—*Le Bulletin Medical*, Feb. 28, 1892.

GRIPPAL PNEUMONIA.

According to Fiessinger, the most valuable drug in the treatment of the above affection is caffeine. The author recommends the following combination, in hypodermic injection:

℞ Caffeine.....2.50 grammes.
Benzoate of sodium.....3.00 "
Distilled water.....q. s. for 10 c. c.
Of this solution, 25 centigrammes should be administered at each injection.

—*Le Bulletin Medical*, March 2, 1892.

CORYZA WITH ANOSMIA.

Having reduced the hypertrophic condition of the mucous membrane by the ordinary means, Ragoneau institutes the following: 1. Twice a week the membrane touched with a ten per cent. solution of chloride of zinc; 2. During the following eight days, insufflations are applied four to five times a day, of this powder:

℞ Acetanilide,
Iodol.....āā 2.40 grammes.
Oxychloride of bismuth.....15.00 "

For the following eight days the author recommends the following powder:

℞ Sulphate of strychnine (neutral).0.08 gram.
Pulverized tobacco,
Oxychloride of bismuth.....āā 6.00 grams.

The alternate use of these two powders in the manner indicated has given the most satisfactory results.

—*Rev. de Laryngologie, d'Otologie et de Rhinologie*, No. 5, 1892.

FOR NEURALGIAS.

Gouguenheim (*Rev. gen. de clin. et de Therap.*) recommends the following in the treatment of the above:

℞ Exalgine.....0.25 to 0.75 gramme.
Alcohol (90 p. c.), q. s. to dissolve.
Syrup.....10.00 grammes.
Distilled water.....90.00 "
M. Sig.—To be taken in the course of the day, one-half at 2 o'clock, and the other at 5, in the afternoon.

—*Gazette Medicale de Paris*, March 12, 1892.

OINTMENT FOR CRACKED NIPPLES.

Vinay recommends the following:

℞ Aristol.....4.00 grammes.
Liquid vaseline.....20.00 "
M. Sig.—To be applied by a camel's hair brush.

—*Gazette de Gynæcologie*, No. 137, 1892.

CHRONIC TONSILLITIS.

After the excision of the tonsils, Gampert (*These de Paris*) recommends the local application of the following mixture to the operated parts:

℞ Iodine.....0.20 gramme.
Iodide of potassium.....0.50 "
Glycerine.....60.80 grammes.
Water.....10.00 "

After the application, the same author advises the use of a borated or iodated gargle.

—*Rev. de Laryngologie, d'Otologie et de Rhinologie*, March 15, 1892.

INJECTIONS FOR CHRONIC CYSTITIS.

ULTZMANN recommends the following prescriptions in the treatment of this troublesome condition:

℞ Crystallized carbolic acid.....gr. xv.
Distilled water.....ʒ iiiss.
Dissolve, and mix with equal parts of hot water at the moment that the liquid is to be injected.

Or the following:

℞ Boric acid.....ʒ ss.
Glycerin.....ʒ i.
Distilled water.....ʒ x.
Make a solution, and mix with equal parts of warm water at the moment of employment.

Either one of these solutions, when warm, may be used for washing out the bladder in cases of chronic cystitis. When the vesical secretion is catarrhal and has a bad odor, the following injection is useful:

℞ Nitrite of amyl.....gtt. v.
Distilled water.....ʒ iv.
Mix, and add a tablespoonful of this solution in the proper quantity of water for a vesical injection.

—*L'Union Médicale*, No. 12, 1892.

HYPERCHLORIDRIA.

Dr. L. Boaz (*La Semaine médicale*, No. 6, 1892) advises the following in dyspepsia with over-acidity:

℞ Calcined magnesia.....grams 15
Carbonate of bismuth } .....āā grams 5
Carbonate of soda }
Extr. belladonna } .....āā grams 10-20
Ext. nux vomica }
A teaspoonful of this powder thirty minutes after each meal.

HYDRASTIN IN UTERINE HÆMORRHAGES.

Instead of being employed hypodermatically in severe menorrhagia and metrorrhagia from myomas, hydrastin may be given internally according to formula:

℞ Hydrastini hydrochl.....gr. viij.
Pulv. et. succi. liquoritiæ q. s. ut fiant pill. No. 10. Consp.
Sig.—One to two pills daily. If there be hæmorhage, two pills daily. In cases of menorrhagia, one pill daily may be given for several days before the time of the expected hæmorrhage.

—*Therapeutische Monatshefte*, No. 6, 1890.

HYPODERMIC TREATMENT OF METRORRHAGIA.

Dr. Baroni has used the following successfully in metrorrhagia from myomata of the uterus:

℞ Ergotin crystallizat
Acid lactic.....āā gr. iij.
Aqua lauroceras.....fʒ v.
Aqua distillat.....q. s. ad fʒ iij. M.
Sig.—Inject hypodermically twelve to sixteen drops at a time.

—*Gazetta degli Ospitali*, No. 22, 1890.

FOR GOUT.

The new medicament, piperazine, has been employed by Vogt and Bardet, with asserted success in the treatment of gout. One gramme of the drug is dissolved in some mineral water (500 grammes), to be taken in glassfuls in the course of the day. The same authors recommend the following as a local treatment:

℞ Piperazine.....1.00 to 2.00 grammes.
Alcohol.....20.00 "
Water.....80.00 "
M. Sig.—External use.

—*Journal de Medecine de Paris*, March 20, 1892.

PASTE FOR INFANTILE ECZEMA.

℞ Tr. campho-phenique.....1.00 grammes.
Bismuthi stbnitrat.
Zinci carbonat.
Amyli
Vaselini
Lanolini anhydr.....āā 2.00 grammes.

As a carminative, the following mixture is excellent:

℞ Tr. columbæ.....ʒ iij.
Spts. ammon. aromat.....ʒ jss.
Tr. cardamomi comp.....q. s. ʒ iij.
M. Sig.—ʒ ss pro re nata.

—WENDE, *Buffalo Medical and Surgical Journal*, January, 1892.

FAVUS.

Dr. Henry W. Stelwagon gave the following treatment for Favus: Wash the head, using sapoviridis, and allow the lather to remain on the head for ten to thirty minutes. Remove the hair from the affected area and apply the following ointment:

℞ Unguent sulphuridis.....ʒ iv.
Unguent picis liquid.....ʒ ij.
Unguent hydrarg. nitratis.....ʒ ij.
Acid carbolici.....fʒ ss. M.

—*Coll. Clin. Rec.*

DEATH IN AN INFANT FROM LARYNGEAL OBSTRUCTION BY VOMITED MILK-CURD.

Demme (*Bericht des Jenner's schen Kindersp.*, Berne, 1891) has reported the sudden death of a dyspeptic child, ten months old, without recognizable cause, in which at the autopsy the esophagus and entrance to the larynx were found occluded by a coagulum of cows' milk ejected from the stomach by vomiting and causing asphyxia.—*Centralbl. für die gesammte Therap.*, x, 3, p. 171.—*News.*

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Leading Articles.

THE ÆTIOLOGY OF PLEURITIS.

In early medical history the problem regarding any disease which the physician was called upon to answer, was the question as to the most efficient therapy. With the gradual advance of medicine the question of the pathology of the disease, and closely connected with this its ætiology, assumed the greater importance. The precise study and investigation of the ætiology of disease has one great end in view apart from the therapeutics, viz., prophylaxis. The most important problem before the profession is prevention rather than cure.

It has been but a few years since that both profession and laity considered certain contagious and infectious diseases incident to childhood as entirely unavoidable; and, indeed, mothers of not many years ago were wont to expose their children when in robust health to these diseases, when consequently likely to endure them with safety. It was with a feeling of almost boastful security that our parents would tell of their children having had measles, diphtheria, whooping-cough, scarlet fever, mumps, etc., but would perhaps add with regret "but he has yet to have chicken-pox." Prior to the introduction of vaccination, small-pox was regarded as being one of the most likely of diseases. Poor children! Is it not a wonder that the startling infant mortality of a few years ago was not even greater?

As the profession has gradually awakened to the possibility of the prevention of disease, and dare even look forward to a not distant period when many of the scourges of mankind will be stamped out, the study of the ætiology is asuming an ever-increasing importance.

Pleuritis is a disease the ætiology of which has been most obscure until the discovery of the tubercule bacillus by Koch seemed to throw additional light upon the

subject. In this connection we would refer our readers to a most interesting contribution on the subject: a lecture by Dr. A. Fiedler, delivered before the Society of Natural and Physical Sciences of Germany, and discussed at length in the *Medicinische-chirurgischen Rundschau*, the *Meidcinische Neuigkeiten* and elsewhere.

Although phthisis plays the most important rôle in the ætiology of pleuritis, and the majority of pleurites spring from a tubercular origin, yet there remain a number of inflammatory processes of the pleura —without reference to the carcinomatous and pyæmic pleurites—that have nothing whatever to do with tuberculosis. We refer to the frequent and suddenly developing cases of bilateral pleuritis. The majority of these inflammations Fiedler regards as true rheumatic affections, occasioned by the same noxious element—a plasmodium, bacillus or coccus—that is the ætiological factor in acute articular rheumatism. Again, the same infectious matter which to-day in one individual may cause rheumatic polyarthritis, may to-morrow in another cause pleuritis—that is, inflammation of another serous membrane. The localization of the rheumatic poison may occur in the most varied organs. At one time, as is the rule, it may invade one organ, while at another it may affect several organs simultaneously. Although the pathogenic organism may as yet be unknown to us, yet the entire affection and the entire course of acute polyarthritis point to the correctness of the theory of the infectious character of the disease.

As the most probable entering portal of the infectious substance, Fiedler, as well as many other authorities, regards the tonsils as such, and also the mucous membrane of the pharynx. This for the reason that at the outset of rheumatic disease these parts are very frequently reddened, swollen, and indicative of an irritated condition quite different in character from an angina follicularis, and which is in all probability due to an invasion of streptococci. Fiedler believes in the existence of a rheumatic angina, and claims that under certain circumstances the infectious matter may be confined to the tonsils, in which case the activity of these may prevent a general infection.

For this reason it would be well to treat this class of anginæ with salicylic acid or other anti-rhuematic remedies, in order to abort, if possible, a general infection. Regarding the nature of the infectious matter, Fiedler is of the opinion that in this class of pleurites we are dealing with an amœboid or plasmodium similar to that of malaria. Quinine, as is well known, acts directly upon the plasmodium of malaria, and in polyarthritis salicylic acid and its salts are most efficient, while either drug is entirely wanting in action in infections due to cocci or bacilli. Consequently, Fiedler advances the plasmodium theory. In connection with this theory, Fiedler calls attention to certain confirmatory points observable at the bedside:

I. That acute rhuematic polyarthritic is very frequently associated with inflammation of the pericardium, endocardium and pleura.

2. That frequently the most intense cases of articular rheumatism are entirely unaccompanied by any affection of the heart or pleura during their entire course, while on the contrary slight cases of articular rheumatism, hardly worthy of the name, so slight, indeed, as to be frequently overlooked, cause the severest complications in the heart and pleura.

We are, therefore, forced to admit the existence off a rheumatic polyarthritis unaccompanied by swelling, painfulness or reddening of the joints—similarly are we forced to acknowledge the possibility of scarlatina sine exanthem.

3. That frequently the same patient during the period of his illness may in turn

be affected by simple articular rheumatism, during a second with pleuritis or pericarditis, and during a third articular rheumatism complicated by cardiac troubles.

Feidler in his discourse cited the histories of illustrative cases confirming the second and third points mentioned.

He believes that the infectious matter of rheumatism, be it what it may, as soon as it enters the circulation, causes primarily certain general disturbances of the organism (fever etc.,) and then localizes itself upon and in the serous membranes, and as a rule causes irritation and inflammation of the synovial membranes, or of the endocardium or pericardium, and frequently of the pleura.

Many affections which do not in the least resemble the symptomological picture of acute articular rheumatism as taught in text-books, nevertheless concur with this disease ætiologically. This fact has already been called attention to by Immermann. Many cases of pericarditis with adhesions of the cardiac sac, and many cases of endocarditis and their valvular complications, and certain cases of moycarditis undoubtedly are caused by rheumatic infection, without the previous or simultaneous existence of articular rheumatism.

In many cases of cardiac trouble in patients who have previously not had acute rheumatic polyarthritis or any acute or chronic infectious disease (scarlet fever, syphilis, etc.), Fiedler claims that if the patient is young, and the existence of atheroma can be excluded, he always suspects that a rheumatic affection has previously occured, and a slight endocarditis has existed.

That the same pathogenic microörganism which is the ætiological factor in certain forms of acute pleuritis (and inflammation of the cardiac sac) is also the cause of acute rheumatism, Fiedler endeavors further to prove by the undeniable favorable action of salicylic acid and its salts upon the former diseases. In these, as in the latter, the drug seems to check the development of or even kill the microörganism. On this account Fiedler recommends that such a therapy be instituted as early as possible before there is any extended effusion. He is convinced that large doses of salicylic acid (1 gramme every two hours, or about 6 grammes daily) are frequently able to abort pleuritic inflammations, as well as affections of the joints. If the effusion already exists this therapy, of course, is of no avail. The same may be said (as has frequently been noted by other writers) for the cases of so-called genuine pericarditis.

Fiedler also believes that erythema nodosa, certain neuroses, especially acute polyneuritis, are due to a similar rheumatic infection to that of articular rheumatism.

It may be that Fiedler goes too far, but it must be understood that his arguments do not tend to prove that rheumatism is the cause of certain forms of pleuritis, pericarditis, etc.; simply that their ætiological factor, or in other words the pathogenic germs of these diseases are indentical. His arguments, based upon clinical researches, besides experience and careful study, are not only well-grounded, but based upon plausable and rational theories, and backed by many indisputable facts.

It remains now for the bacteriologist to prove or disprove the correctness of his assertions. At all events, his work forms an interesting and valuable addition to medical literature.

In conclusion, we would call attention to a point upon which we laid stress in the beginning of this article: the all-important and ever-increasing value of the study of the ætiology of diseases, which we consider well illustrated in what has been said.

INTESTINAL ANTISEPSIS.

℞ Salol,
Salicylate of bismuth,
Bicarbonate of sodium.....āā 150 grains.

Sig.—To be devided into 30 powders in capsules. One capsule to be taken before breakfast and before dinner.

—*Dujardin Beaumetz.*

Book Reviews.

PSYCHO-THERAPEUTICS or Treatment by Hypnotism and Suggestion. By C. Lloyd Tuckey, M.D. Member of the Medico-psychological Association; Membre Fondateur de la Sociètè D'Hypnologie; late Visiting Physician to the Margeret St. Infirmary, London: Baillière, Tindall & Cox, 1891.

The fact that this elementary treatise upon psycho-therapeutics has attained a third edition proves that it has been widely read and approved by the profession. The first edition, which appeared in 1889, was only intended by the author as little more than an introduction to the subject, but each subsequent edition has received such additions that the present volume may be said to fairly represent a synopsis of most of the modern theory and practice of hypnotism.

The book as a whole is an explanation of the scope and limitations of hypnotism in the treatment of disease, of its mode of application, and is also a discussion of the views of such men as Charcot, Liebault and others having practical familiarity with hypnotism as a therapeutic agent. The whole subject is fairly represented, and while the writer of the work is a follower of Liebault in both theory and practice, he does not fail to present the views of the more extreme school, of which the best example is perhaps Charcot. Such careful and scientific studies of this at present much abused and neglected subject are needed, so that, as soon as possible, we may arrive at some definite ideas respecting its proper place in medicine. A careful reading of this work will go far towards dispelling the natural prejudice which has hitherto existed against the use of hypnotic suggestion in the treatment of disease, and cannot fail to convince one that there is a proper field of usefulness for it in medical science.

The work contains an interesting account of Dr. Liebault's treatment as practiced by him at Nancy. The important physiological and psychological facts concerned in hypnosis are fully and accurately stated. The relation of hypnosis to sleep is noted, and the theories of the production of the hypnotic state are carefully presented. The latter half of the book deals with the practical use of hypnotic suggestion, besides giving a large number of clinical cases which were successfully treated by the author and others.

The volume is certainly an addition to the literature of the subject and offers a most excellent rèsumè.

A TEXT BOOK OF NURSING, by Clara S. Weeks-Shaw. Second edition, revised enlarged, with illustrations. New York: D. Appleton & Co., 1892.

The present edition of this comprehensive manual of practical nursing presents several improvements over its predecessor. A chapter has wisely been added upon the management of gynæcolgical cases, and is thoroughly in accord with the modern advances in that branch. The advances in surgery in recent years have necessitated the addition of many good practical things to the book. It is especially intended as a text-book for training schools, but practitioners will also find it instructive reading, since it contains a number of facts relating to the care of all sorts of cases, from which one may gather helping hints, representing as they do the combined experience of many competent men. The book is creditably printed and bound, contains very few typographical errors, and this improved and modernized edition will no doubt be welcome to those who have occasion to use a modern text-book on this subject. It is a vast improvement on the first edition issued six years ago, and we commend it freely to nurses, and families needing a useful household book, as well as to physicians who may desire to note the latest modes of the art of nursing.

NATIONAL CONFERENCE OF STATE BOARDS OF HEALTH.

The Eighth Annual Meeting of the conference of State Boards of Health will be held in Lansing, Michigan, June 6th, 1892.

The meeting will convene at 10.00 A. M., in the Senate Chamber of the State capitol.

Governor Winans will informally receive the members of the Conference in the Executive Rooms in the State Capitol during the day or evening of June 6th. The Local Committee has expressed the hope that the time of the members of the conference will permit of their visiting the three other State Institutions located at Lansing.

Headquarters will soon be at the Hotel Downey, where special rates have been secured.

C. O. PROBST, M. D.,
Secretary.

Correspondence.

PREMATURE BALDNESS AND ITS CURE.

EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—In the issue of April 23rd, 1892, I notice an extract taken from the *Lancet* on "Premature Baldness and its Causes." This article is a criticism on a previous article of Dr. Tyson's on the same subject. Dr. Tyson's idea is that men are more frequently bald than women, because they wear a heavier and more complete head covering than women. The *Lancet* disputes this cause, and lays it to the natural difference between the heads of men and women as regards hair growth, and gives as this natural difference a superior vascularity of the scalp of women as compared with men. Now it appears to me there is not so great a natural difference as the *Lancet* seems to think, but that dress is really to blame. The place to look for this natural difference is among the savages, who do not wear modern head gear, or perhaps none at all. I think in that case the natural difference would disappear, just as it has in regard to the difference in the manner of breathing between the sexes. Women breathe in the upper part of the lungs, because their clothes will not let them do otherwise, and when observations are made on savage women, they are found to breathe all over the lungs just as much as men. Now in regard to the difference in the vascularity of, especially, the top of the head in men, I think it probably is less than in women, because men generally wear short hair, and a hat that is tight enough to stay on even in a wind. Women seldom do so, but pin the hat to the hair to make it stay on, or else fasten it by an elastic band under the coil of hair back of the head. Now we all know that one can do a comparatively bloodless operation upon the scalp, by placing an Esmarch bandage around the head just above the brows, because by the bandage, the flow of blood is cut off from the top of the head; and I think the close-fitting hat acts very much in the same manner as the Esmarch bandage. Men and women are *sexually* different, in other respects there is not really so much difference as many think.

MARY E. ALLEN, M.D.
PHILADELPHIA.

Periscope.

THERAPEUTICS.

HYDROCHLORATE OF HYOSCINE AS A HYPNOTIC IN INSANE CASES.

Willerup has given hydrochlorate of hyoscine internally, in doses of ½ to 3 milligrames ($\frac{1}{125}$ to $\frac{1}{20}$ grain) twice a day, to calm insane patients and to produce sleep. Shortly after taking the hyoscine some mydriasis is observed, the frequency of the pulse is greater, and the pulse becomes full and hard; later, the face is pale and the frequency of the pulse diminishes. When turbulent insane patients were given hyoscine twice a day they were, as a rule, more quiet and somewhat sleepy during the daytime and slept well at night. In some cases the condition of the patient was evidently ameliorated by the use of the hyocine; in others the effect was only transitory.—*Hospitals-tidende*, 1891, p. 389.

THE THERAPEUTICAL APPLICATION OF PIPERAZINE.

Piperazine possesses not only the property of dissolving a large proportion (1:2) of uric acid at normal temperature, but forms with excess of uric acid a neutral, readily soluble urate salt. One part of urate of piperazine will dissolve in 50 parts of water at 17° C. (62.6° F.) If we consider that the solubility of urate of lithium at 19° C. (66.2° F.) is stated as 1:368, i. e., that urate of piperazine is at least seven times more soluble than the urate of lithium, and that furthermore piperazine is neither caustic nor toxic, the preference must surely be given this product over all other so-called uric-acid solvents. To learn from personal observation what influence piperazine would exert on human metabolism, in addition to other experiments elsewhere reported, we instituted a series of trials on human subjects. The literature on the therapeutic application of piperazine is as yet meagre. Our sole information was derived from a circular published by the manufacturers, quoting the results achieved by a French physician who had experimented with a sample on himself, and who reported that after taking piperazine the total quantity of uric acid was reduced one-third, and that an excess of urea was eliminated.—Drs. W. Ebstein and Charles Sprague in *Berliner Klin. Wochen*, Nov. 14, 1891.

SYZYGIUM JAMBOLANUM IN DIABETES.

Hildebrandt (*Berl. klin. Woch.*, January 4th, 1892) says it is generally accepted that diabetes mellitus is chiefly brought about by increased sugar production and by its diminished decomposition and consumption. The first factor presupposes an abnormal fermentation under the influence of a sugar-forming ferment. In diabetic urine an increase in diastatic ferments has been found, but no such experiments have been made in regard to the blood. A destruction of ferment takes place in the normal organism, and the author has found that certain organs, like the pancreas, render vegetable ferments inert. Degeneration of the pancreas has been frequently found in diabetes, and extirpation of this organ may induce diabetes in animals. Among the antifermentative remedies used in diabetes, syzygium has been much recommended. The author's experiments show that this drug has a decidedly hindering action, both on plant diastase, as also the sugar-forming ferments in the blood, serum, saliva, and pancreatic extract, but no corresponding effect on pepsin and trypsin. Salicylic and lactic acids, etc., also used in diabetes, gave mostly a negative result in this respect. Syzygium so alters the substratum (starch, glycogen) that it is unassailable by the ferment. Its active principle is not a ferment, nor yet tannic acid. In the body syzygium may act by hindering the conversion of starch into sugar in the alimentary canal and of glycogen into sugar in the tissues. It does not interfere with proteid digestion.—*Brit. Med. Jour.*

THE ACTION OF STRYCHNINE ON THE STOMACH.

The *Khirurgicheski Vestnik* publishes an account of some experiments by Gamper on the action of strychnine on the stomach. Observations were made on seven persons, five of whom were in health, one suffered from gastralgia with excessive secretion of gastric juice, and the last (Gamper himself) from gastric catarrh. The observations extended from twenty to thirty days, and during the first and last week no strychnine was given to excite the stomach. Ewald's test-breakfast was given, and observations were undertaken to determine the volume of gastric juice, the percentage of total acidity, the proportion of hydrochloric acid by weight, the digestive power of the juice, the result of fermentation and the absorbent power and movements of the stomach. Nitrate of strychnia was given at breakfast time in doses varying from 0.002 gramme to 0.005 gramme, but sometimes increased to 0.015 gramme. The activity of the stomach was increased in all respects, with the exception of that due to the ferment and the lactic acid. Gamper attributes the usefulness of the drug to the increased excitability of the medulla caused by the strychnine.—*Lancet.*

STROPHANTHUS IN THE TREATMENT OF GOITRE.

Dr. S. Yount-Lafayette (*La Semaine Médicale*, No. 54, 1891) has obtained very good results in goitre from the use of the tincture of strophanthus, administered three times a day in a gradually increasing dose of ten to sixteen drops.

HYDROGEN PEROXIDE IN EYE DISEASE.

Dr. S. S. Golovin, of Kütaïs, (Cuacasian Med. Soci., May 14, 1891) relates his experience with hydrogen peroxide in ophthalmic practice. The following is a summary of his conclusions:

1. In healthy eyes hydrogen peroxide causes only trifling smarting, and transient conjunctival congestion; in diseased eyes —especially when deep corneal ulcers are present—the medicament may give rise to a more or less intense burning sensation, which, however, quickly disappears of itself.

2. Solutions of hydrogen peroxide are somewhat unstable; but decomposition can easily be prevented by the addition of a small quantity of ether, and by preserving in dark bottles in a dark place.

3. For lotions or irrigations, a 3 per cent. solution may be employed; for collyria, 10-15 per cent. solutions.

4. The best results from hydrogen peroxide are obtained in corneal affections; simple ulcers rapidly disappear, without being complicated by purulent infiltrations; suppurating ulcers speedily become cleaner and healthier; infiltrations undergo absorption; and healing takes place without perforation of the cornea occuring. In hypopyon-keratitis, hydrogen peroxide is also valuable; if the instillations be made

regularly and thoroughly, even cases in which operative interference would be necessary are found to yield to the remedy.

5. Hydrogen peroxide is serviceable also in conjunctival affections—particularly phlyctenular conjunctivitis, and acute gonorrhœl ophthalmia (the instillations being repeated not less than 4-5 times a day, or even every two hours.) In simple acute and chronic diffuse conjunctival catarrhs, and in trachomatous or follicular conjunctivitis, hydrogen peroxide seems to be useless.—*Mercks Bulletin.*

MEDICINE.

TUBERCULOUS LARYNGEAL TUMORS.

Avellis (Frankfurt-a-M.) gives an interesting paper on Tuberculous Laryngeal Tumors, in the *Deutche Med. Woch.*, Nos. 32–33, of 1891. He speaks extensively upon the subject and relates his own cases, which tend to show that polypi, which resemble in every way fibromata, are sometimes of a tuberculous nature.

1. Patient, 25 years old, had been hoarse for some months; on the right vocal band, upon its free margin, was made out a polypus the size of half a pea; the growth being pedunculated, the growth resembled a fibroma, but upon microscopical examination it was found to be of a tuberculous character; not until ten months later was the first indication of lung trouble observed.

Female, aged 40, had a tumor springing from the left vocal cord; growth much resembled a polypus, but further examination showed typical tuberculosis.

3. Patient, aged 19 years, had large tumor on right vocal band, ulceration of posterior wall; lung affection came on later.

4. Patient, 32 years of age, growth on right vocal band; operation, seven months later, ulceration took place and disease of lungs quickly followed.

5. Patient, aged 39; upon the posterior wall was observed a small tumor, which was looked upon as phthisical, but upon further examination it proved to be simply thickened mucus membrane; sometime later, however, a typical tuberculous ulcer appeared upon the posterior wall and lung disease followed.

6. Patient, aged 49 years; in the anterior angle (commissure) was discovered a red-grayish tumor, about the size of a cherry; operation was performed with Gollstein forceps; typical tuberculous ulcer followed and the following year an ordinary laryngeal phthisis was present.

This report tends to show that tumors of a tuberculous nature are not so rare as sometimes supposed, and in every case where a tumor is present the lungs should be examined and if such tumor be removed, careful microscopical examination should be made.

THE SEMEIOLOGY OF VERTIGOS.

Paul Blocq and Ovanoff (*Le Mercredi Medical*, October 7, 1891) divide vertigos into apoplectic, and vertigos proper. Of the latter they write: Vertigo is essentially a sensation. The patient loses his equilibrium, feels as if falling, or as if turning rapidly, or as if objects about him were moving. The sensation may be present not only while standing, but while lying down. At the same time there is usually a feeling of anguish, often described as a sense of falling. Often the loss of equilibrium causes a fall, but the patient never loses consciousness. Various affections of the senses are also observed, as roaring in the ears, flashes of light and peculiar colors. Sometimes retractions of the skin, cold sweats and especially nausea and vomiting are noted. Opening or closing of the eyes has a different effect in different varieties of vertigo. In some, closing the eyes lessens the sensation; in others, increases it. They divide vertigo into *acute* or *accidental* and *chronic* or *habitual.* Of the latter, there are the *constant* and the *frequent* forms. The causes of vertigo are very numerous. They are conveniently arranged in four classes: (*a*) So-called physiological vertigo; (*b*) toxic. Of the physiological, are those caused by rotation, high altitudes, the sight of rapidly moving bodies. Seasickness is between these and nervous vertigos. Of these, they note neuropathic, hysterical and tetanic. Certain cerebral affections also give rise to vertigo, locomotor ataxia and disseminated sclerosis. The organs of sense give rise also to vertigo, especally those of sight and hearing. The symptomatic vertigos are those which depend on lesions of the great organs, as gastric, uterine, laryngeal and those due to arterial sclerosis and heart disease. Under the

toxic vertigos they place those due to diathesis, to infections and intoxications. It seems proved that all of these, whatever be the ultimate cause, are due to affection of the organ of equilibration. This organ comprises the semicircular canals and the cerebellum, the trunk of the auditory nerve and its ganglia, the cerebellar peduncles and the parts of cerebrum and medulla near them. In the diagnosis of vertigo, one excludes the epileptic form by the accompanying loss of consciousness, and the apoplectic by the history of an attack. Syncope also is accompanied by unconsciousness. Hysterical vertigos are distinguished by the other signs of hysteria. When we have excluded these, the question of cause arises. First distinguish the acute from the chronic forms. The cause of the acute vertigos is generally very evident, as the toxic and physiologic. The nervous are of more importance. Among the chronic vertigos, the most important, because most common, is that of Meniere's disease. Others are those of defective vision, of brain tumors and of the diatheses. These can be distinguished by the other characteristic symptoms.—*Univ. Med. Mag.*

SURGERY.

OPERATIVE TREATMENT OF DEFORMITIES RESULTING FROM INFANTILE SPINAL AND CEREBRAL SPASTIC PARALYSIS.

In the *Medical News*, Dec. 19, 1891, De Forest Willard, M.D., Ph.D., states that the deformities of infantile paralysis are preventable by apparatus, but if distortion has occured, secure the best possible limb by immediate surgical procedure, and in some way make the patient walk. Apparently hopelessly distorted cases can be put upon their feet, and even great deformity does not contra-indicate an attempt to straighten the limb and give the individual the power of locomotion. Atrophied limbs can be straightened and incorporated as a part of the locomotive apparatus. Exercise will develop even badly shrunken limbs and continuous improvement may be expected. In the majority of cases surgical measures are preferable, after which mechanical appliances should be employed. Tenotomy or myotomy, while not curative, promotes the health and happiness of the patient. In spastic cases relapse is more common than in infantile paralysis, but the great benefit to body and mind secured by locomotion amply repays for the attempt at rectification.

ARTIFICIAL CORNEA.

The *Berlin. Klin. Wochenschrift* publishes a seventh case of transplantation of cornea by Professor V. Hipple, of Konigsberg. There was a dark-brown central discoloration of the cornea, three millimeters in diameter, and reaching down to the membrane of Descemet, which has been caused by the action of nitrate of silver. Cocaine having been applied, the non-transparent part of the cornea down to the membrane of Descemet was cut into by a little trephine, the crown of which was four millimeters in diameter, and carefully removed. The author then excised by the same means a similar piece from the whole thickness of the cornea in a young rabbit, and transplanted this to the eye of his patient. It filled the wound exactly, and was on a level with the rest of the cornea. Iodoform was applied, and both eyes were bandaged. Healing proceeded without any trouble, and in six weeks the patient was discharged with a completely transparent cornea.—*Lancet.*

A NEW SURGICAL PROCEDURE.

A paper was recently read before the Practitioners' Society of New York which was entitled "How to Raise Sunken Noses." At first sight this very descriptive title is calculated to create somewhat distressing reflections with regard to the kind of statement which the author is about to make. "Sunken wrecks" are at once recalled by the term used, and pumping operations, making good leaky defects, and bringing into service balloon arrangements, after the fashion of Baron Munchausen, rush into the mind as possible details in raising above the surface the author's cases of noses which have sunk. But although the author has thus perhaps unwillingly led us astray, in our calculation he soon lets us into the secret of what he really means. He narrated the case of a young lady whose nose had sunk from the absence of the septum. By making an incision underneath the lip and skin he was enabled to introduce a platinum bridge, which held up the skin, while its feet rested on each side of the nasal sep-

tum. At the end of six weeks the result was still satisfactory. The nose was well held up, and no unseemly scarring had occurred, which was likely to result from other operations undertaken for the same purpose.—*Med. Press.*

DIFFUSE FIBROMA OF BOTH BREASTS.

C. B. Porter (*Boston Med. and Surg. Journ.*, March 3d, 1892) reports the case of a woman, aged 38, who three years before coming under notice discovered a hard lump in the upper part of the right breast. The whole breast gradually increased in size. Three months later the left breast also began to enlarge. In course of time they attained such a size that the woman could not work, and could stand only for a short time. At no time was there any pain. On admission to the Massachusetts General Hospital the following were the dimensions of the two breasts: Right: greatest circumference, 38 inches; length from chest wall to nipple, 17 inches; circumference at base, 23 inches. Left: greatest circumference, 28 inches; length from chest wall to nipple, 14 inches; circumference at base, 23 inches. The skin over them was œdematous and thickened. Throughout both breasts could be felt movable, hardened masses, of irregular outline, varying in size from an orange to a closed fist. There was no tenderness. The left breast was first removed; then, after an interval of three weeks, the right, special precautions for the prevention of hæmorrhage being taken on each occasion. The wound healed well, and the patient made a good recovery, but, when discharged from the hospital, insisted, contrary to advice, on going home, the journey involving a sea voyage in mid-winter, in which she suffered much from cold and sea-sickness. She reached home much exhausted, and in about a week developed erysipelas, first in the region of the right breast, and then spreading over the back and the abdomen. This in four days had markedly faded, when she suddenly aborted of a five to six months' fœtus, and died three hours later in collapse. Her condition was not suspected till she was convalescent from the second operation. Microscopic examination showed the bulk of the growth to be made up of fibrous tissue rich in cells, and holding a good deal of thin serous fluid in its interstices. Embedded in this were glands acini and ducts widely separated, into the openings of which the fibrous tissue had forced its way. In structure, therefore, the growth was essentially a diffuse intracanalicular fibroma, and not a true hypertrophy of the breast. A table of nineteen cases collected from various sources is given. Sixteen of these were operated on, both breasts having been removed in nine. Only one died. In thirteen of the nineteen cases both breasts were affected. The table shows that the disease usually begins about the time of puberty, the enlargement of the breast going on very rapidly for two or three months, and increasing during the first pregnancy, after that generally remaining unchanged.

OBSTETRICS.

THE PARTURIENT WOMAN'S BED AS USUALLY PREPARED.

Much has been said and written in the last few years regarding the question of antisepsis in midwifery practice, and yet, how little attention has been given to the proper arrangements of the parturient woman's bed, and to the dressing to be applied to the vulva after delivery.

The bed is ordinarily prepared by spreading a rubber or oil-cloth over the mattress, to prevent it from being soiled, while upon it is placed an old ragged quilt, which has seen so many years of service in various capacities as to be of no further use in the household, and, consequently, of so little value that it can be readily parted with and thrown away. Over the quilt may be placed several layers of old cloths which have been accumulating in a drawer upstairs for just such an occasion as this, and, musty and unaired, are seized upon by the nurse, or the kindly assisting neighbor, to make a nice warm bed for the prospective mother. Finally, a sheet is spread over all, and the bed is ready for antiseptic midwifery. Worse than this is the feather bed, of so common use in the country. Now, feathers cost money, and the average feather bed is handed down from mother to daughter, and from daughter to grand-daughter, and the feather renovator is an unknown quantity there. Grandmother was probably delivered of ten or twelve children on that bed; mother, of as many more; all of the children had scarlet fever, the measles and mumps on grand-

ma's feather bed; brother John, who had typhoid fever, and the husband, who just recovered from erysipelas, both used the good old feather bed, and it would be cruel to put the good wife, when she is to be sick so long, on anything but the soft feathers. A bundle of cloths from the drawer upstairs is placed upon a chair, within convenient reach, the patient is put to bed, with perhaps a sheet pinned around the waist, her long night-gown drawn up from her hips, and is in readiness for the delivery of another daughter to inherit that feather bed.

During the pains of labor the patient rolls and tosses, her night gown works down under the hips, the sheet around the waist slips up under her shoulders. She is delivered with a gush of water and blood; her night gown is soaked and she is wet to the shoulders. Thus wet and cold she lies for half an hour or more, when the old quilt and rags are drawn away, some more rags from the pile on the chair are tucked under her, the wet night-dress is, after much trouble, removed and a roll of the same old cloths is placed against the gaping vulva, the swoolen labiæ and the torn perineum.—*Amer. Gyn. Journal.*

RUPTURE OF UTERUS EARLY IN LABOR.

Chercha (*Przeglad Lekarski*, No. 42, 1891) writes on the case of a 4-para, who was suddenly seized with a violent pain in the hypogastrium, to the right, when pregnant at term. The pain passed away, the os was but little dilated, the head was movable aud above the brim, the membrane unruptured. There were no labor pains; on the fourth day rigors set in, with fever, tympanites, restlessness and collapse. Hydrocephalus, probable rupture of the uterus, and septicæmia were diagnosed. Chercha tried to perform perforation without anæsthetics, but the mother's abdomen was so distended that the fœtal head could not be fixed He then tried version, after dilating the os with bags; but as he then reached the fœtal head he perforated and nearly a pint of water escaped. Yet neither the cranioclast nor the crochet would hold securely, so Chercha seized the leg and turned, so delivering a mascerated child. After its birth an abundant brownish fœtid fluid escaped. In removing the placenta he found that it lay partly in the abdominal cavity, there being a rupture in the uterine wall to the right. Much hæmorrhage followed. No injections were administered. The intestines, which had prolapsed into the uterine cavity were replaced and the uterine wound was plugged with iodoform gauze (30 per cent.). Parametritis followed, and high temperature continued for six weeks. A small vesico-vaginal fistula remained after the patient had, in other respects, recovered her health. Chercha notes that Hoffman and Simpson have observed rupture of the uterus early in labor not preceded by severe labor pains.—*Brit. Med. Mag.*

TWIN PREGNANCY WITH PECULIAR DISPOSITION OF THE OVA.

Borde (*Gazetta degli Ospitali*, p 133) has reported a case in which the two placentas lay side by side on the lateral and anterior walls of the uterus, and the ova was so related that one capped the other, laterally, like a night-cap. He believes that the two ova entered the womb at the same time, and became attached to the uterus, side by side. In a little while the quantity of liquor amnii was larger in one than in the other. The former, therefore, compressed the latter against the side of the uterus, giving it the peculiar shape just described.—*Univ. Med. Mag.*

GYNECOLOGY.

THE EFFECTS OF OLD PELVIC INFLAMMATION ON PREGNANCY AND CHILDBED.

Blanc (*Arch. de Tocol. et de Gynèc.*, January, 1892) opened a discussion on this subject at a meeting of the Paris Obstetrical and Gynæcological Society. On the basis of clinical facts, he maintained that perimetritic and parametritic inflammations were much aggravated by pregnancy. During gestation, a great afflux of blood in the direction of the pelvis occurred. This circumstance acted prejudicially on inflammatory foci. Abortion often occurred. The dangers were yet greater after delivery. Blanc related cases where general infection, starting from old inflammatory deposits, occurred during the sixth or seventh day of childbed. Whether this represented auto-or hetero-infection was doubtful. Professor Budin agreed as to

the dangers of old inflammatory deposits after delivery, but observed that infection occurs earlier than the sixth day; very fatal effects are sometimes seen on the second or third. M. Gueniot believed in latent microbism. It was mainly, in his opinion, the debility caused by delivery that allowed of general infection. M Lucas-Champion-niere admitted that the prognosis was certainly grave, and that in most of such cases that recovered from childbed the old inflammatory troubles were worse than before. Professor Pajot, gave it as his opinion that a woman suffering from distinct abdominal lesions of any kind ought to be cautioned against allowing herself to become pregnant.—*Brit. Med. Jour.*

UTERINE CANCER: CAUSE OF RECURRENCE AFTER OPERATION.

Winter (*Centralbl. f. Gynäk.*, No. 11, 1892) gives statistics throwing light on this subject. In no case did he observe recurrence in the pelvic glands; it is known that in cases not submitted to operation infection of the glands does not occur till late. Recurrence in viscera is very rare after operation (7 cases in 123). Local recurrence is the rule; 116 patients out of 230 who had undergone total extirpation suffered from recurrence. In some of these cases recurrence took place in small pieces of cancerous tissue which were not removed at the operation. Frequently after the removal of cancer of the cervix, universal cancerous infiltration of the parametrium occurred. Winter attributes this to infection through transplantation of cancerous elements during the operation, since when no operation is performed, cancer of the cervix, as a rule, only infects the posterior part of the parametrium. Recurrence in a cancerous fragment not removed, begins in the operation scar, and grows outwards into the parametrium; whilst the universal malignant disease of the parametrium is often quite independent of the scar. This malignant infiltration often grows very quickly and uniformly over the entire parametrium, which is not in favour of its origin in a solitary cancerous fragment in the scar. This infiltration is hardly ever seen after cancer of the body of the uterus or of the canal of the cervix; it is very frequent after cancer of the surface of the cervix, where the instruments used in the course of the operation come in contact with the cancerous tissue. Hence Winter holds that cancerous infection in the course of operation is a danger not to be overlooked; in many cases it is the sole cause of recurrence, and, when pieces of cancerous tissue are left behind, it aids to make the disease recur in a worse form. Hence, in operating, great care must be taken to guard against the danger of infection. In cancer of the cervical canal and uterine body the cavity should be disinfected and the os closed by suture. In cancer of the surface of the cervix the disease should be scraped away with the sharp spoon, and the surface cauterised before the uterus is removed.—*Brit. Med. Jour.*

THE ANATOMY AND PHYSIOLOGY OF THE FALLOPIAN TUBE.

Milroy (*Glasgow Med. Journal*, 1891, No. 6) has made investigations, the results of which are somewhat at variance with the prevailing views. He describes glands in the mucous membrane lining the fimbriæ, which secrete a viscid fluid when the latter grasp the ovary, the function of which is to cause more intimate union between them, and thus prevent the ovum from escaping into the peritoneal cavity. On account of the number of folds in the mucosa, it seems hardly credible, he thinks, that the ovum is drawn into the ampulla by capillary attraction, assisted by the motion of the ciliæ. The inner end of the ampulla, where the folds are scanty, seems to be the most favorable locality in which impregnation could occur. When impregnated, the writer suggests that the ovum is impelled by a "nervous force" (*vis nervosa*) through the isthmus into the uterine cavity.—*Amer. Jour. Med. Sci.*

PEDIATRICS.

NOCTURNAL ENURESIS CURED BY EXCISION OF LUSCHKA'S TONSIL.

Kœrner (*Centralblatt f. klin. Med.*, 1891, No. 23, p. 417) reports the cure of nocturnal enuresis in two girls, one nineteen years old, the other three years, following the extirpation of Luschka's tonsil, which in each case was considerably hypertrophied. This cure was immediate and complete. These cases, therefore, illustrate the important part that nasal obstruction may play in the pathogeny of noctur-

nal enuresis. The coexistence of hypertrophy of Luschka's tonsil and the nocturnal incontinence of urine of childhood (already remarked by Major, Ziem, Bloch, and Schmalz) is, however, so unusual that it is necessary to consider that without the existence of same predisposing weakness of the sphincter vesicæ, adenoid vegetations of the pharynx could not alone excite incontinence.—*Amer. Jour. Med. Sci.*

SUBCUTANEOUS INJECTION OF SALINE WATER IN THE GASTRO-ENTERITIS OF YOUNG CHILDREN.

Demiéville (*Revue Mèdicale de la Suisse romande*, Nov. 1, 1891) reports a case of severe diarrhœa, with vomiting, in a child, aged four and a half months, and of the successful result which followed the subcutaneous injection of a solution of chloride of sodium. Diarrhœa commenced on October 26th, and continued with but little abatement until the 31st, when the child fell into a state of extreme collapse—pulseless, cold, dusky in hue, and unable to utter a cry. On the next morning an injection was given under the skin of the thighs of a 6 per cent. solution of chloride of sodium. Immediately afterwards massage of the thighs was practiced, to facilitate the absorption of the liquid. Improvement rapidly followed, and the child recovered completely without any recurrence of the diarrhœa or vomiting. The first effect of the injection appeared to be upon the circulation; the pulse improved, and the face became quite red. Whether this was due to the mechanical pressure of the injected fluid upon the walls of the blood vessels, the tension of which had been reduced to the lowest point, or to its direct action as a stimulant upon the cardiac nerves, the author does not enter into any discussion. This improvement in the circulation must rouse to action the central nervous system, depressed from want of nourishment, or possibly by some auto-infection, and thus lead to a restoration of the functions of the various organs of secretion and excretion.

Careful directions are given as to asepsis in this operation, which the author urges is so simple as to present no difficulties either in the method of its application or in the instruments required.

In conclusion, Dr. Demièville makes a suggestion which appears worthy of careful consideration. In cases of diphtheria in which septicæmia has occurred, when swallowing is impossible, and nutrient enemata are rejected, when the circulation is almost at a standstill, and death imminent, he believes that subcutaneous injection of saline fluid might prove of the greatest value. It is in this condition that elimination by the kidney is often entirely suppressed, and on this account there is all the more reason to expect from such an injection a salutary effect upon the system.

NURSING BOTTLE.

Budin (*Journ. de Méd. de Paris*, 1891, iii, 483.) gives the following description of a new nursing bottle:

In a rubber cork, which may be used with any bottle, two tubes are placed, bound together; the larger allows the passage of the milk, the other, very small, permits the entrance of air; a nipple of rubber and a flat washer of bone complete the instrument. The tube intended for the passage of air must be very small, in order that the milk may not escape by it when the bottle is reversed, and also that the milk shall not flow too rapidly through the larger tube.

ACTION OF ICE AND ICE-WATER IN DIPHTHERIA

The treatment of diphtheria as employed by Dr. Bleyne consists in the application of ice upon the neck, and the internal use of ice. If ice is not obtainable, water as cold as possible may be used instead. The author claims that cold destroys the bacillus of diphtheria.—*Buffalo Med. Journal.*

HYGIENE.

THE BACILLUS OF MEASLES.

The *Berliner klinische Wochenschrift* of April 18th, contains a paper by Drs. P. Canon and W. Pielicke, Assistant Physicians to the Moabit Hospital, Berlin in which they give the results of researches on the bacteriology of measles recently made by them at the suggestion of the director, Dr. P. Guttmann. They point out that cocci have been found by various investigators in the lungs of persons who had died of pneumonia complicating mea-

sles; and that Babes found micro-organisms not only in the lungs, but the lymphatic glands, the mucus of the nasal fossæ, the conjuntival secretion, and in the exanthematous patches themselves; he also found cocci in the blood obtained from the papules, and in one also very short bacilli. In cultures he obtained streptococci which bore a resemblance to the S. pyogenes. Canon and Pielicke made stained preparations of the blood of fourteen patients suffering from measles, and in all cases they find "one and the same" bacillus. The preparations were made in the same way as in Canon's researches on influenza, and were stained with an eosin-methylene blue solution. They now generally employ a solution composed as follows: Concentrated watery solution of methylene blue, 40.0; ¼ per cent. eosin solution (in 70 per cent. alcohol), 20.0; distilled water, 40.0. The preparations were placed from 5 to 10 minutes in absolute alcohol, and then from 6 to 20 hours in an incubator at a temperature of 37° C. The following solution was also used with advantage: Concentrated watery solution of methylene blue, 80.0; ¼ per cent. eosin solution (in 70 per cent. alcohol), 20.0. From two to three hours in an incubator suffice for staining. In the preparations the bacilli were found stained blue, sometimes uniformly, but frequently much more deeply at the ends than in the middle; sometimes only the edges of the middle portions were stained. The size of the bacilli is very variable; sometimes they are as long as half the diameter of a red blood corpuscle, sometimes they are quite small, and have the appearance of dipococci; between these two extremes they show several gradations in size. Occasionally they are of extraordinary length, almost equal to the diameter of a red corpuscle; in that case they do not stain uniformly, but present three or four colorless spots alternating with the stained portions. As a rule, this form of organism does not stain deeply, the ends in particular often showing a very slight tinge of blue. These bacilli were frequently slightly bent, and were found only in preparations made towards the end of the disease (sixth day.) The author believes the bacilli found by them in the living blood in these fourteen cases of measles to be a specific kind, and to be the true exciters of the disease. They are found in very variable numbers, the first two or three preparations of one specimen of blood sometimes showing only a few bacilli, while on the other hand the field was sometimes packed close with them at the very first examination. They frequently occur singly, but in the majority of cases (12 out of 14) they were arranged in larger or smaller clusters. Their arrangement in the clusters presented nothing characteristic except that they often showed a tendency to lie parallel to each other; in other cases they lay close behind each other, and formed obtuse angles. The bacilli were found during the whole course of the disease, and in one case even three days after defervescence; in this case they had been present in unusually large numbers at the period of crisis. As a rule, the bacilli were found most abundantly at the time of defervescence. In addition to the fourteen cases referred to, the author examined the blood of seven children who had had the measles just before, and in some of whom the rash had not entirely faded away. The results of the examination were negative. They also examined, about ten hours after death, the blood of a child who had died of measles without any lung complication, but the presence of the bacilli could not be determined with certainty; in this case the blood had not been examined during life.

Some of the preparations were stained by Gram's method; the bacilli remained unstained, but were as distinct as the red blood corpuscles. Bacilli of the same shape as those found in the blood were seen in the expectoration, and in the nasal and conjunctival mucus of patients suffering from measles. In all cases, before the preparations were made, blood of patients with measles, obtained by pricking the finger, was inoculated in glycerine agar, blood serum, or milk (woman's), but they did not succeed in cultivating the bacilli on these nutrient media. More recently they used chiefly bouillon, inoculating each test tube with from one to three drops of blood; generally from six to ten tubes were used for each experiment. In three cases they found in the inoculated bouillon bacilli which agreed in all points with those found in the blood, but could not be further cultivated on glycerine ager, blood serum, or bouillon. The bouillon remained clear for a time, there being a sediment at the bottom of the tube which was partly deposited from the inoculated

blood; after some days a slight opacity became visible, and small flakes formed which rose on shaking the tube. In these bouillon cultures the bacilli were found in different forms, sometimes uniformly stained, sometimes resembling diplococci, sometimes more like diplobacilli. Some of them exceeded in length the longest seen in the preparations of blood. The bacilli in these bouillon cultures do not stain by Gram's method, and they display only slight power of independent movement. In one of the three cases referred to, these bacilli were found in large numbers in all the tubes of bouillon (four in number) which had been inoculated with blood; inoculations made at the same time on glycerine agar and blood serum remained sterile. The inoculation was in these cases made towards the end of the fever at the commencement of the crisis; in the blood preparations made at the same time the bacilli were found in considerable numbers. This was the case in which the bacilli were found in the blood three days after defervescence. From the same child blood has been drawn into sterilized tubes, and, after having been kept two days in the incubator, inoculated in bouillon and agar. In one of the tubes containing bouillon bacilli were also found, while glycerine agar inoculated with the same tube remained sterile; here also all attempts at further cultivation failed.

By this method Bruschettini (*Riforma Medica*, January 29th, 1892,) cultivated influenza bacilli obtained from living blood; it was several times employed by Canon and Pielicke in the course of the present investigation, but, except in the case mentioned above, without result. In the two other cases in which bacilli obtained from the blood was cultivated in bouillon, the inoculations were made during the course of the fever, yet bacilli obtained from the blood was cultivated in bouillon, the inoculations were made during the course of the fever, yet bacilli were found in only one or two of the tubes, all the others remaining sterile. The result was also negative in a series of inoculations made from one to two days after the subsidence of the fever. Sometimes, indeed, a few bacilli (two to five) were found in a preparation obtained from blood-inoculated bouillon, after sufficient shaking of the tube and very careful search, but it seems to the authors, doubtful whether this can be taken as a proof of multiplication of the bacilli. In one case, in which death was due directly to measles, numerous inoculations of the blood were made on different nutrient media, including bouillon, about ten hours after death; all these remained sterile.

Finally, an attempt was made to cultivate these bacilli on blood serum glycerine agar by the method employed by Wertheim for the cultivation of gonococci (*Deutche med. Wochenschr.*, 1891, No 50), but without result. The blood serum came from a person who was said to have passed through a severe attack of measles seven years previously, and the authors argue that there are special advantages in obtaining this nutrient medium from the blood of persons who have never had an attack of measles, and have, therefore, not acquired more or less immunity against that disease.

Canon and Pielicke concluded by stating than the bacilli found by them in the blood of patients suffering from measles are essentially different from the micro-organism hitherto described in connection with that disease, They admit however, that Babes's "bacilles très courts," which he does not further describe, may be indentical with theirs, but he only mentions having found them once, and seems to have attached no importance to the matter.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

A DELICATE TEST FOR ALBUMIN IN THE URINE.

Spiegler suggests the following formula for the discovery of albumin in the urine as being the most delicate test we possess:

℞

Hydrarg. chlor. corrosiv.....	8	parts.
Acid. tartar.....	4	"
Aq. dest	200	"
Sacch. alb.....	20	" M.

The test-tube is filled one-third with the reagent. The urine is filtered and made strongely acid with acetic acid. It is then allowed to flow down the side of the tube, drop by drop, until it lies in a layer over the reagent. If albumin is present, a sharp white ring is seen laying between the two layers of fluid. If it is necessary to test heavy diabetic urine, more sugar may be added to the reagent, in order to raise its specific gravity. It is necessary to decompose any carbonate that may be

present, in order that it may not form a precipitate with the sublimate. But the precipitate may be recognized by the fact that when shaking the liquid the apparently caseous precipitate will disappear and the fluid become clear.—*Boston Med. Surg. Jour.*

DETERMINATION OF MERCURIAL CONTENT OF MERCURIAL OINTMENT.

Thein in the *Bulletin* of the Société Pharamaceutique de Bruxelles, gives the following: Fill a large test tube to within 2 cm. of its top with an aqueous solution of nitrate of sodium (2:5), or of magnesium sulphate (1:2). Add a determined quantity, say 4 gm., of the mercurial ointment to be tested, and place the tube in a warm-bath. On account of the specific gravity of the liquid the ointment at first floats on the surface, but little by little, as the ointment base melts, the mercury collects at the bottom of the tube, until finally each particle separates. Carry a little staff with a button on the end, down through the melted fat, and after cooling withdraw it bringing the fat away, and then collect, dry and weigh the mercury.

PURE BORON

M. Henri Moissan submitted to the Academy of Sciences last week an important essay on the preparation of pure boron. Magnesia mixed with an excess of boric acid and heated gives a mixture of boron, borate of magnesium, and boride of magnesium. By sucessive washing in acids the borate and the greater part of the boride are eliminated. By the fusion of the remaining boric acid the residue of the boride is oxidized, and, after washing, pure boron is produced. In another paper M. Moisson showed that when boric acid is treated with sodium or potassium great heat is given off, and owing to this heightening of temperature, the greater part of the boron unites with the excess of alkaline metal. When the compound is subsequently treated with water and hydrochloric acid, a mixture is obtained (after desiccation) composed of boron, boride of sodium, boride of iron, hydride of boron, and hydrated boric acid. This mixture, M. Moissan pointed out, had hitherto been regarded as amorphous boron.—*Paris Corresp. of Chem. and Drugg.*

NEWS AND MISCELLANY.

NEW YORK PASTEUR INSTITUTE.

During the second year of its existence (February 18, 1891, to February 18, 1892) 574 persons who were bitten by dogs, cats and other animals applied for treatment. These patients may be divided into two categories:

1st. In the case of 461 of these persons it was demonstrated that the animals attacking them were not mad. Consequently the patients were sent back after having had their wounds attended to during the proper length of time.

2d. In 113 cases the anti-hydrophobic treatment was applied, hydrophobia of the animals inflicting bites having been evidenced clinically or by inoculation at the laboratory, and in many cases by the death of some other persons or animals bitten by the same dogs.

Indigents have been treated free of charge.

The persons treated were: 36 from New Jersey, 22 from New York, 12 from Massachusetts, 8 from Connecticut, 6 from South Carolina, 5 from Texas, 4 from Maryland, 3 from North Carolina, 2 from Missouri, 2 from Ohio, 2 from Pennsylvania, 2 from Arkansas, 1 from Alabama, 1 from Georgia, 1 from Iowa, 1 from Louisiana, 1 from Michigan, 1 from Rhode Island, 1 from Virginia, 1 from Mexico, and 1 from West Indies (Curaçoa).

By the examination of the results, one will see that those obtained at the New York Pasteur Institute are about the same as those reported by the kindred institutions. It is unnecessary to comment upon them, as they will be well appreciated by any unprejudiced mind.

Let us remember that last year 42 deaths caused by hydrophobia have been formally reported of persons bitten by rabid animals, and who were not submitted to the inoculations. This makes about 80 deaths for the period included in our statistics, during which three persons died despite of the treatment. And without taking exception for the patient (Earl) who came only four days after his terrible fight with the dog, if we consider, as they do abroad, that this treatment has produced its full effects only fifteen days after it has been completed, we see that the percentage of those who died after the fif-

teen days following the inoculation has been only 2 out of 298, or 0.66 per cent.

Among the 298 persons treated, 177 have been attacked by animals undoubtedly rabid. If we consider again that statistics indicate 25 per cent. as a low per centage of deaths after bites inflicted by hydrophobic dogs; and then counting only 177 instead of 298 persons bitten, we ought to have had not two or three cases of death, but at least 44. Moreover, 123 persons among the 177 bitten by hydrophobic animals had their wounds inflicted on the face, the head, or the hands. We know that bites of this nature are followed by hydrophobia in a much larger proportion, say at least 40 per cent. The number of deaths ought to be, then, no less than *seventy* among the persons so bitten, who came from the different parts of the country to submit themselves to the Pasteur treatment.

LEPROSY IN JAPAN.

Another missionary who devoted himself to the succor of lepers has just completed his sacrifice by giving his life in their service. Father Testevuide, who may be called the Damien of Japan, established the first leper house in that country in 1886. At that time no provision whatever was made either by the Government or the public for the care of lepers, and it was only by the most persevering efforts that the energetie priest was able to collect sufficient funds to build a leper house on Mount Fusi. This institution he personally managed till his death. His example has been fruitful, and now there are three asylums for the victims of leprosy in Japan, all apparently owing their existence to private charity.—*British Medical Journal.*

PHYSICIANS DO NOT WRITE.

This is the general cry of those who desire to see them come to the front. As the California *Medical Journal* very justly observes, there seems to be a misconception, on the part of the profession in general, on the subject of writing for medical journals. The average practitioner seems to think that none but the editors of the journals or one who is a teacher in some medical college could or should write an article for the perusal and criticism of the general profession; nor lay down theories and laws to govern others. Poor indeed is the physican who dare not get out of the beaten paths, and may be ruts, of his predecessors, be they his teachers in the college he has attended, or the authors of his text books. Can he blindly follow any of these and be successful? No! Then, if he dare differ with them in his theories and practice why not go on record as differing with his own confreres? This would be a slow world if we all believed and did the same. How did our teachers gain their present status of knowledge and success? Was it not by observance and experience of others? Can't you do likewise? You have not only your teacher's knowledge to build upon, but also that of their predecessors; hence your advantages are greater than those of many professors in our colleges, and you could teach them many wholesome lessons, that you have never been taught, but learned by experience, in general practice. Hence you do yourselves and the progress of medical science an injustice in not contributing to the literature of the profession.—*Med. Review.*

SOCIETY MEETINGS DURING JUNE.

June 1st—Ontario Medical Association, at Toronto.

June 2d—Oregon State Medical Society, at Portland.

June 2d—Rhode Island Medical Society, at Providence.

June 2d—State Medical Society of Arkansas, at Little Rock.

June 4th—American Academy of Medicine, at Detroit, Mich.

June 7th—American Medical Association, at Detroit, Mich.

June 7th—Massachusetts Medical Society, at Boston.

June 8th—South Dakota State Medical Society, at Salem.

June 14th—Medical Society of Delaware, at Dover.

June 15th—Minnesota State Medical Society, at St. Paul.

June 20th—American Association of Andrology and Syphilology at Richfield Springs, N. Y.

June 20th—New Hampshire Medical Society, at Concord.

June 21—Colorado State Medical Society, at Denver,

June 28—Medical Society of New Jersey at Atlantic City.

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Clinical Lectures.

TRAUMATIC EPILEPSY; THIERSCH'S METHOD OF SKIN GRAFTING; LIGATURE OF THE FEMORAL ARTERY FOR POPLITEAL ANEURISM; ABSCESS OF KIDNEY; CARCINOMA OF THE BREAST

By CHARLES McBURNEY, M. D.
DELIVERED AT THE ROOSEVELT HOSPITAL, NEW YORK.

TRAUMATIC EPILEPSY.

Gentlemen:—This is the patient who was operated upon last Saturday for an injury received on the head a number of years ago, and which was followed by epileptic attacks, occuring at irregular intervals, but increasing in severity, and without a previous history of epilepsy. I found a positive surgical indication in the condition of the surface of the skull, as there was a marked depression which I thought might involve the internal table. The operation consisted in exposing the affected area, and making two large openings in the skull, and connecting them by a rangeur. On enlarging this opening upwards subsequently, I found that the inner table was not affected, although the outer one showed very marked elevations and depressions, and considerable change in the structure of the bone. The bone was very firmly adherent to the dura mater, and was separated with considerable difficulty. The dura mater was then opened, and some adhesions found between the dura mater and the arachnoid. At the anterior part of the operating field, there was also a very distinct thickening and whitening of the arachnoid membrane between two convolutions, covering an area about half an inch in diameter, and beneath this, there seemed to be an accumulation of fluid situated beneath a very thin layer of cortical substance. On cutting away this thickened arachnoid, however, and passing an instrument through the cortex a short distance, no fluid was found. The posterior part of the brain was perfectly normal in color, consistency, and pulsation, but the anterior part was flat and soft, and without pulsation. It was evident, therefore, that changes had taken place in the cortical tissue, probably due to small hæmorrhages on the surface of the brain at the time of the original injury, and that these had subsequently undergone softening. A small portion of the organ was removed from this situation, and subjected to microscopical examination; and in doing so, I had no hesitancy, for this part of the brain is practically unimportant, and I knew that I would not injure any motor function. The dura mater was then brought together, a small rubber drain inserted, and the skin flaps united by sutures. The patient has had a perfect week of convalescence, and the wound, as you see, is in excellent condition. So far, there have been no convulsions of any kind since the operation, and whereas, he had before the operation a dull expression, he now has a much brighter look, which has been noticed by others as well as by myself. This man has had before this intervals of many days in which he has been free from convulsive attacks of any kind, and hence, we cannot say yet how much good the operation has done him, but we must not forget that a sufficient lesion was found to account for his convulsions, and its removal would naturally lead us to expect a good result.

THIERSCH'S METHOD OF SKIN GRAFTING.

The next patient is the man upon whom I operated at the last clinic, and removed what I took to be a sarcomatous tumor

originating in a distinct traumatism. The injury was followed by a hæmatoma, and I believed that this underwent changes which converted it into a sarcoma. The operation which I performed, consisted in the complete removal of the sarcoma, which was fairly deeply situated, and closely attached to the deep fascia, and the wound was closed by grafts of skin applied according to Thiersch's method, the edges of the wound being stitched to the deep fascia to prevent undue motion of the parts. The wet dressings have been changed every forty-eight hours, as is my custom in these cases, and although there has been a little slipping of one of these grafts, the others have done extremely well. The wound has filled up level with the surrounding surface, and there is not the usual excavation we find in these cases of grafting. Had this one graft not slipped, the result would have been almost perfect. The change of dressing every forty-eight hours I have found sufficiently frequent, although Thiersch makes wet applications every four hours, night and day. The less frequent change of dressings I find yields just as good results, and is, of course, much less laborious. After about two weeks, we shall substitute a dry dressing, and perhaps then, some of the granulations will require to be stimulated with the actual cautery. This is the best application, nitrate of silver and similar caustics not seeming to act well upon the granulations. This method of skin grafting certainly has much to commend it when compared with the ordinary plastic operations. A few weeks ago, I operated upon a case where it was necessary to fill in a gap under the lower eyelid, measuring two inches laterally, by one inch in the vertical direction. If covering it by a plastic operation, it would have required a large flap from the cheek, or a drawing together of the sutures to such an extent as to cause eversion of the lid; but by this method of grafting, I was able to apply dry dressings in ten days.

EPITHELIOMA.

The third case is that of the old man with epithelioma involving about two-thirds of the lower lip, and associated with enlargement of the lymphatics under the jaw. He was operated upon, you will remember, one week ago, but he has not done so well as the others. On the second day after the operation, he developed a high temperature with signs of pneumonia, and although he appears to be convalescent now, I did not consider it advisable to bring him up to the operating theatre to-day. A portion of the tissue has sloughed, probably as a result of the continued high fever, and it is likely that a secondary operation will be required.

LIGATION OF THE FEMORAL ARTERY.

Our first patient to-day, is a man, twenty-seven years of age, with a tumor in the left popliteal region of comparatively short duration, and of comparatively large size. He was not aware of its existence until six weeks ago, but it is probable that it has been there for a longer time. He says that he has had pain in this leg for a number of years, but I cannot say whether or not this has any connection with the present tumor. At present, there is a pulsating tumor occupying the whole of the popliteal space, having thin walls, and pulsating both laterally and vertically. This pulsation is entirely stopped by pressure on the femoral artery. A loud aneurismal bruit is heard over the whole of this tumor. The tumor shows a decided tendency to increase, and has already caused considerable pressure on the popliteal vein, as shown by the enlarged veins of the leg, and by its pressure on the nerves, it is causing considerable pain in the limb below the knee. This case, therefore, seems to be one demanding surgical interference. He gives no history of traumatism, or syphilis, although it is possible that there has been syphilitic degeneration of the arterial walls.

In reference to the treatment of this case, I have decided to ligate the artery above the aneurism, and at the site of election in the lower part of Scarpa's triangle. I have for the most part discarded the method of treating aneurisms by digital, or other method of compression, although my experience formerly with this method was quite satisfactory, five or six cases which I treated in this way, having all recovered. But, this was before we had so much confidence in antiseptic treatment of wounds, and I think that the attention of the profession was directed to digital compression chiefly from a desire to avoid a cutting operation. Digital compression

is a terribly laborious process, and one who has not attempted it can have but little idea of the hard work it entails. The best assistants cannot keep up the compression longer than about ten minutes at a time, and hence there must be a very frequent change of assistants both night and day. I have decided in this case, therefore, to adopt the method by ligation. My own experience with this method has been very satisfactory, as I have never had any accident or bad result, such as gangrene, follow the application of the ligature. I look upon this case, however, as one where there is reason to be a little anxious as to the final outcome, for the patient is very anæmic, and the interference with the venous return is considerable, so that it is possible that the shutting off of the vascular supply may lead to disagreeable consequences. Notwithstanding this risk, his condition is such that the operation seems to be eminently proper. There is a very slight pulsation in both the anterior and posterior tibial arteries, and you will see by the purplish discoloration of the feet, the amount of interference with the venous return.

The limb has been thoroughly cleansed first with soap and water, and then with turpentine, alcohol, and ether, so we are ready for the operation. I begin by making an incision which will freely expose the lower part of Scarpa's space. I wish to apply two ligatures here, for I desire to divide the vessels between them, so as to remove the tension. Having applied these ligatures, I now pass a director under the vessel, preparatory to dividing the artery. Upon dividing it, there is an immediate separation of one-quarter of an inch, and I find that pulsation in the vessel has entirely ceased. The wound is now closed with deep and superficial catgut sutures, and the usual antiseptic dressing applied, and the limb well wrapped up in cotton, and bandaged from the toes to the groin. The limb is next fastened to a long posterior splint with a foot-piece, the limb being slightly flexed, and the foot raised on a pillow, for I desire in every way possible to favor the circulation in the limb.

ABSCESS OF THE KIDNEY.

In this next case, I incline to the diagnosis of a tubercular suppurating kidney, but I must admit that there is hardly sufficient grounds for a positive diagnosis. The patient is a delicate tubercular looking girl, twenty-three years of age, who says that some five years ago, she began to suffer from irritability of the bladder with frequent micturition and scanty urine, but that with this exception, she was in good health until about three months ago, when her general health began to fail rapidly, and she noticed at about the same time, a painful and tender point in the region of the right kidney, and this increased until the whole lumbar region became quite tender. She has had repeated chills, and considerable fever and night sweats. Four weeks after this tenderness was first noticed, she says there was a discharge of pus from the vagina, but we can obtain no history of bladder irritation at this time, and hence, I cannot say where the discharge came from; it may not have been pus. It occured to me that this might have been a discharge of pus from a distended kidney, and that she thought it came from the vagina, when in reality, it came from the bladder. There was only very temporary relief following this discharge.

At present, she is feeble and anæmic, and has a large mass in the right loin, occupying the region of the kidney, which anteriorly and laterally feels quite firm, but posteriorly, over the region of the kidney, presents an area of fluctuation which probably indicates a considerable collection of pus. Judging from the history, it is difficult to state when this formation of pus began. The examination of the urine gives us no clue to her condition. It is found to be of a yellow color, and to contain only a few leucocytes and epithelial cells and granular matter, but it has a low specific gravity—1004. It contains no albumen, and is practically a normal urine. I am, therefore, in considerable doubt whether we have to deal with a long continued obstruction of the ureter due to a calculus or some other cause, thus causing obstruction of the pelvis of the kidney, or whether there is tubercular disease of the kidney which has finally broken down and produced this abscess. These are the two most important conditions, but I cannot exclude entirely from the history a sarcoma of the kidney, associated with a purulent collection. I hope that incision and drainage may restore the patient to a fair condition of health, for I think she

would hardly survive an operation as severe as extirpation of the kidney.

The first step in the operation is to ascertain with an exploring syringe whether or not there is pus present, for if this be a suppurating kidney or a perinephritic abscess, I should feel that a nephrotomy would be all that I ought to do for this patient, and if subsequently extirpation were called for, it could be done much more safely than now, and if malignant disease were present, I should still feel that the main point would be to employ measures directed towards stopping her chills and fevers, and sweating. This can be accomplished by draining any collection of pus which may be present. You see that the aspirating needle withdraws pus, and this seems to be so superficial that if it originated in the kidney, it must have long since escaped from the kidney tissue.

The patient being placed in the prone position, an incision was made in the loin, and immediately a thick stream of pus gushed out. My finger now passes into a large cavity measuring six or seven inches vertically. It extends up to the spine, and its anterior wall is composed of the mass already referred to. The portion of the tumor occupying the anterior part of the loin feels quite firm, but I should expect to find pus there also. The aspirating syringe, as you see, again withdraws pus, but it is in a small cavity, and a large part of this tumor is evidently quite solid. My finger now passes into a large abscess cavity in the upper part of the kidney itself. After thoroughly sponging out the wound, a number of punctures were made, but no pus found, and hence, it is most likely that the disease is chiefly confined to this upper part of the kidney. Looking upon the case as probably a tubercular one, one would expect several suppurating foci, but as such are not found, it seems better to content ourselves with draining those which have been found, rather than incising the surface of the kidney without a more positive indication for such interference. The cavity is now thoroughly irrigated with Thiersch's solution, and the inside of the cavity mopped out with a sponge well sprinkled with powdered iodoform. A packing of iodoform gauze, and a compress of the same material, with a broad bandage, completes the dressing. My object is to treat this case as though there were only one abscess present, and if other foci develop later on, they will be treated in a similar manner.

CARCINOMA OF BREAST.

Our third patient is fifty years old, and she presents herself with a large tumor of the left breast, dating back for about two years, although the larger part of the growth has been noted only during the past four months. It involves more than one-third of the circumference of the breast; it has drawn the nipple slightly inward, and the skin is quite firmly attached to it over a considerable area, but is not attached to any extent to the deep fascia. There is one small spot of ulceration, and the mass has the true feel of a carcinoma. There is also enlargement of the axillary glands. The question arises, can this region be entirely covered by the skin of the neighboring parts, or must we resort to grafting? Although the skin is quite redundant here, and notwithstanding that a free incision will be required, it is quite probable that we may be able to close the wound by a flap of skin from the adjacent parts. The breast is included in a very long elliptical incision extending up into the axilla, and my assistants secure the vessels with clamps as the dissection proceeds. Having removed the breast, and cut open the tumor, you see that it is a typical carcinoma which has broken down in one or two places. We see now that this tumor was not attached to the underlying fascia. I find the glandular enlargement in the axilla so considerable that nothing but a complete removal of the contents of this region will prove satisfactory. As I remove these glands, and cut them open, you notice they present well marked evidence of being involved in the disease. I have cut with entire indifference as to whether I could cover the wound with flaps or not, as it is of the first importance to cut well beyond the diseased area, and it is a secondary consideration whether or not it will be necessary to resort to a plastic operation or to skin grafting. I find that there is still enough skin left to bring the flaps together so as to cover the greater part of the wound, but there is a small area which cannot be so covered without making undue traction upon the flaps, and therefore I shall close in this portion by Thiersch's method of

grafting. Before grafting, I shall introduce a number of interrupted sutures around the edge of the area to be grafted, and this step I consider quite important, as it not only diminishes slightly the size of the wound, but it fixes the edges. A portion of the patient's thigh having been thoroughly cleansed, an assistant makes the skin tense, while with a sharp razor, a long, thin, and broad strip of the skin is removed and transferred to the surface to be grafted. By the use of two broad instruments armed with teeth, the skin of the thigh is held tense, and at the same time *flat*, so that a long graft of nearly equal thickness throughout can be removed. If great attention be not paid both to the manner of holding these instruments, and to the position of the limb while cutting the graft, the surface of the thigh cannot be made flat, and consequently it will be impossible to remove even grafts of any considerable size. The grafts, as well as the surface from which they are removed, are kept wet with salt solution (6 per cent.) during the whole process of grafting, and the surface from which they are taken is dressed with rubber tissue and compresses wet with the same solution, and covered with cotton secured by a bandage. This dressing will not be removed for eight or nine days, and at the end of this time, the surface will be found entirely healed. When this dressing is used, the patient suffers no pain in the part from which the grafts were taken. The grafted portion of the wound is also covered with rubber tissue and compresses wet in the salt solution. The remaining portion of the wound has already been closed by interrupted catgut sutures. I have inserted a piece of rubber tissue through an opening in the axilla to facilitate drainage, as I find this answer in these cases fully as well as rubber tube. The operation is completed by applying the usual firm dressing of bichloride compresses and cotton. The dressings over the grafted portion will be changed every forty-eight hours, but the bichloride dressing will not be disturbed for a number of days.

I do not consider the prognosis in this case good, for the previous history, together with the amount of disease found at the operation, would lead us to expect a recurrence of the disease, but I hope that this may be postponed for eighteen months or two years.

ON THE ÆTIOLOGY OF IRITIS.

By PROFESSOR DE LAPERSONNE,
LILLE, FRANCE.

Gentlemen: Iritis has always been divided, from an ætiological point of view, into traumatic, syphilitic, rheumatic and other kinds. Putting aside the traumatic form which may be easily ascribed to an infectious external cause, I will speak to you about the ætiology of the so-called spontaneous, medical iritis, due to internal causes. Until recently, such have been termed dyscrasic iritis. The actual tendency, and of which I entirely approve, is to always consider the cause of iritis as an infectious one, and thus it may be said that iritis is the result of an infectious state. Though this proposition is easily demonstrable by a certain number of cases, it is far from being admitted by authors. If we adopt, from the start, the prevailing ideas about infection, it is seen that the field is admirably prepared for what is termed secondary infections. The iris, like all the uveal tract, is composed of an extremely rich vascular tissue, erectile, comparable to that of the lungs; the liver and the kidneys, and where diapedesis takes place readily; this diapedesis being probably one of the means of defence of the organism during the period of phagocytosis. A histological examination will reveal to us the existence of this diapedetic process at the beginning of an iritis. Again, it is well known that one of the means by which the organism rids itself of toxic substances is elimination carried on by the glands. You are familiar with the part played by the kidneys in this respect. Now, the uveal tract is a gland, a gland of the aqueous and vitreous humors, studied recently by Bouchard and especially by Nicati. Such is the field; let us examine the seed.

Clinical observation has for a long time permitted us to recognize the frequency of iritis in the infectious malady *par excellence*: syphilis. In this instance it is not necessary that the microbe be discovered. The proportion of these cases, although variable according to syphilographers and ophthalmologists, is quite considerable. On the other hand, the period for the appearance, and the gravity of the disease, depend on the degree of virulence. In malignant syphilis, the affection coincides

with the appearance of the roseola. You know how syphilis affects old individuals, and, in this respect, I will cite the case of an unfortunate countryman who came to our clinic, suffering from an intense gummous iritis. He still had upon the chin two chancres produced by the razor of a clumsy and careless barber; the body of the patient was covered with a confluent papulo-squamous eruption and numerous mucous patches. This man exhibited at the same time the primary, secondary and tertiary symptoms of syphilis, if we look upon the gummous affection of the iris as a tertiary manifestation of the constitutional disorder.

Iritis is of frequent occurrence in states manifestly infectious, such as tuberculosis and leprosy. Blenorrhagic iritis has been described, and there is no doubt, at present, that blenorrhagia is due to a general systematic infection. Still further: the frequent occurrence of iritis during the existence of intestinal disorders, has been attributed to a reflex infection. This subject is treated by Cohn in a recent work on the *Uterus und Auge.* A few months ago, in the *Semaine Medicale*, Wecker described metritic iritis as originating from a focus of infection in the female genital organs. Grandclement (*Soc. d' Opth.*, 1891) has referred to a special inflammation, an iritic uveitis, which the author attributes to a special microbe, and due to a poor elimination of organic waste by an insufficient renal action.

All these cases are rare, and constitute a small proportion among those producing iritis. After syphilis, the most frequent cause of iritis is rheumatism. Is rheumatism an infectious disorder? You know that this question is to-day discussed by authors and that some of these answer in the affirmative. Other writers (and they constitute the large majority), however, maintain that it remains to be established, especially in regard to acute rheumatism. Nevertheless, for one of the varieties of this affection, the answer is not doubtful. Such is the infectious pseudo-rheumatism of Bouchard, studied by Bourcy in his thesis, and of which I, myself, have reported examples in one of my papers. This rheumatism may give rise to very intense iritic and iridocyclitic manifestations. I remember the wife of one of my colleagues, who, during convalescence from a serious attack of infectious rheumatism, became afflicted with what may rightly be called lymphangitis of the eye-ball.

The objection that may be made is, that iritis is only produced during the articular attacks. On questioning patients, we may only find the signs of an arthritic temperament: a hereditary rheumatic or gouty history. Two years ago Hutchinson revived this question in the *Royal Society of London.* In his opinion, arthritic iritis is produced under the influence of two factors: the first, a hereditary one which in a special manner modifies the tissues; the second, a personal one—a climateric influence for the rheumatic form on the one hand, and on the other, errors of diet increasing the quantity of urates in the blood and tissues, for the gouty form.

In my opinion, there is another way of understanding the processes which are engaged in the production of iritis. I have frequently observed the co-existence of digestive troubles and the affection under consideration. Patients are often dyspeptic, and frequently suffer from dilatation of the stomach. One of the most interesting cases which I have seen is that of a woman who, for several months, was a victim of successive attacks of iridicyclitis. She was thin, exhibited a cachectic aspect, had bad teeth, and suffered from fetor of the breath. She had alternate attacks of constipation and diarrhœa, and was afflicted with a marked dilatation of the stomach, but there was no sign of neoplasm.

I made a careful, systematic study of this case, and I was delighted to observe an amelioration produced in the condition of the eyes by an appropriate treatment directed to the alimentary tract.

You have seen an interesting example at my clinic, in a patient suffering from repeated attacks of episcleritis with anterior irido-choroiditis. It is particularly upon these insidious relapsing forms of the disease that the influence of digestive troubles is most markedly observed. On questioning patients you will find a history of alternate periods of diarrhœa and ocular disorders, a condition which they will explain in their own manner.

You are familiar in a general way with the frequency of digestive troubles occurring in rheumatic, gouty and arthritic patients, even without the errors of diet insisted on by Hutchinson. If it is difficult to prove that the infectious agent is of a microbian origin, cannot it be admitted

that, under the influence of these alterations of the digestive tube, the septic products (ptomaines or toxalbumins) are reabsorbed and go to produce the special irritation which causes iritis? This is the hypothesis advanced regarding the production of certain inflammations of the skin, such as eczema or acne. It appears to me rational to admit that the same hypothesis may be resorted to when called upon to explain the production of iritis. Thus we may account for the periodical attacks, for the frequent relapses. It also explains the good effects obtained from intestinal revulsion, particularly after the use of calomel as advocated by English practitioners. Do not certain medicaments, like salicylate of sodium for instance, exercise an antiseptic action on the intestine?

The practical inference drawn from these facts is, that eliminating syphilis and the various infectious causes which have been enumerated, it is well to examine carefully the digestive tract, especially in cases of iritis with a tendency to relapses.

To the ordinary local treatment may be associated a well regulated diet, according to the precise indication advocated by Bouchard, and the employment of antiseptics such as salol, naphthol, iodoform and others.—Translated from *Le Bulletin Médical*, February 21, 1892.

CEREBRAL DISTURBANCES FOLLOWING INFLUENZA.

Mueller (*Berlin. Klin. Wochensch.*, No. 37, 1890) reports the case of a man aged fifty, who after an attack of influenza presented a condition of great physical exhaustion. In a few weeks his mind seemed affected and he became somnolent, so much so, that he could be roused only with the greatest difficulty and then he would almost immediately fall asleep again. There was pain upon pressure over the vertebræ, the neck was rigid, the pulse was small and irregular, the skin reflexes were diminished and the tendon reflexes were absent. This condition lasted for about two weeks when he began to improve. He slept less and his mind became clear, but he had no recollection of what had occured during the course of the disease. The reflexes returned to normal. The author thinks there was a cerebro-spinal meningitis similar to that seen after other infectious diseases.

Communications.

THE BLENDED TOCCI BROTHERS, OF LOCANA, ITALY.*

By ROBERT P. HARRIS, M. D.
PHILADELPHIA.

We have here a nude representation of what we must regard as the most remarkable duplex monstrosity that the world has seen since the death, three hundred years ago, of their Scotch analogue who had reached the age of twenty-eight years. This peculiar type of twins appears, on an average, twice in a century, as there have been about a dozen in the last six hundred years, and but two in the current century. The most remarkable feature about the Locana twins is that they are living and in good health at the age of fourteen and a half years, and bid fair to reach mature age, because of the perfection and independence of their thoracic and abdominal viscera. In the last six hundred years but two monstrosities of the same type have lived out their first year; and this early mortality we must attribute to a want of internal anatomical symmetry, and particularly to an abnormal construction of the heart and distribution of the blood-vessels in one twin. It is doubtful if unite twins are ever equals in mental and physical vigor, and the Tocci Brothers are as nearly alike in health and strength as has been the case in the subjects that have lived the longest.

The photograph before us represents the boys in a standing position, but it will be seen at once that they are mainly sustained in it by the use of their arms, and that this is more markedly the case with the left twin, whose shoulder is forced upward, because of the weak support given by his club-foot and imperfectly developed leg.

These twins were born in Piedmontese, Italy, on October 4, 1877, after a labor of eight hours, under a midwife, the head of the right boy, Giovanni, coming first; and he appears to have held that relative position, in a mental sense, ever since. Giacomo's head soon followed, and then came

*Dr. Harris brought to the notice of the College of Physicians an enlarged photograph of this remarkable monstrosity, which had been prepared for the Mütter Museum at the desire of its curator, and made the following remarks:

the double thorax, a single abdomen, one pair of legs, and a single placenta. Nothing was said about the cord, except that there was but one; but it was no doubt composed of six vessels—four arteries and two veins. The twins weighed 8¾ pounds when a month old, and probably a pound less at birth. When three years old, as shown by a photograph, they had shoulders, a corpulent abdomen, and, for their age, large testicles. Giovanni had a long face and a girl-like appearance, but his head-circumference has always been a little the larger of the two.

These xiphodidymi belong to the class that is distinguished by having two heads, four arms, and only two legs. In general outline they resemble, when their legs are together, a letter Y—the heads, shoulders, and chests down to the sixth ribs making the V, and the abdomen and legs the I, or stem. Their present weight is 95 pounds a healthy, robust boy of their age. Their arms, having much more exercise than their legs, are larger, in proportion to their age, than the latter; and the glutei muscles of Giacomo are badly developed, because of his talipes equino-varus, and consequent inability to develop them by exercise. Single boys of fourteen, as a rule, have much better developed legs than arms, which led to the expression in war times: "Better fitted for running away than handling a musket." But the Tocci boys are the reverse of this in strength.

If we had a back view of the monstrosity, it would show their two inner arms crossing each other over to their outer shoulders, in the position in which they usually hold them; two converging spinal sulci extending down to two sacra; two outer nates, as in a single subject; and two little rudimentary nates with a cleft between them, located over the intra sacral symphysis. They have no rudimentary nodule to represent an attempt at the formation of a third leg, as has been found in some analogues.

As they look at you, the two boys are quite different in facial contour, and Giovanni is generally credited with having the better mind; but their faces in profile bear a closer resemblance. They have fair skin, and at times a rosy color, and thick brown hair. Their bodies are short, and they are below the medium height, for their years. Their facial expression is not a happy one, when in repose, and reminded me of what I have noticed in boys having deformed feet—a shame-faced look.

In measure of health the twins compare well with normal children of their own sex, having had but little sickness since birth, and not having lost a day therefrom since they commenced to exhibit themselves in the United States, six months ago.

Giovanni is the stronger and more erect of the two, has the better ear for music, learns a foreign language the more readily, and is generally the more intelligent of the two. He has a natural talent for drawing, and is devoted to making pictures of our domestic animals, such as the horse, cow, etc., and of some of the savage quadrupeds, as of the lion and tiger. Giacomo is the critic in art, although drawing but little, and his taste is for caricatures. The brothers converse a great deal together. They are both right-handed, although one might have supposed that Giacomo would have naturally preferred his free arm, the left.

The boys have each two lungs, the outer being the larger, and are forced to breathe largely by their diaphragms. They have separate and distinct hearts, located in the left chest-cavity respectively, and these hearts are believed to be normal in structure. Giovanni feels his heart beating on the left side—and if either boy has an abnormal cardiac structure, he should be the one—yet his color and health, indicate the contrary. The cardiac beats are not synchronous, aud one heart generally pulsates a little quicker than the other

They have two stomachs, and that of Giovanni is said to be reversed, the greater curvature being to the right, as was the case in Rita, of the Sassari girls of 1829. I was not permitted to verify this, because of the opposition of the father. These two stomachs are as independent functionally as if they occupied two different abdomens. Recently, when traveling by railroad, one of the boys became very pale, and directly vomited the contents of his stomach,* while the other was so entirely free from nausea that he laughed at his brother for his mishap. One brother may wake up hungry, drink a cup of coffee, and eat something while the other remains asleep. The two stomachs do not appear to be influenced in the least by being in

*This was repeated by Giacomo in public on April 23, 1892, at the Dime Museum, Philadelphia.

contact, but only by their respective pneumogastric nerves.

There are evidently two sets of intestines—large and small. One boy can have a desire to defecate when the other has not; and this is particularly the case when one has a diarrhœa, in which event he only has a discharge, while the other is passive. There must, therefore, be two colons, as were found on autopsy in the Padua boys of 1691. They have probably a common rectum, as had also the Padua analogue; but it is possible that this part of the bowel may be bifid, which would be an interesting feature to determine by touch or speculum. The twins, from habit and convenience, defecate almost always at the same time.

They have two bladders and one urethra, as had also the Padua boys, although they usually urinate together. As their tastes for food and desire for drink are not the same, one boy may be awakened from his sleep in the morning by a distended bladder and empty it without waking up the other, in whom the kidneys have been less active.

My catechetical examinations made last month confirm the opinions respecting the anatomy of the twins that were formed after auscultation, percussion, and a knowledge of their habits, by Drs. Fubini and Mosso, of Turin, in their second month, and by Drs. Colrat and Rebatel, of Lyons, in their thirteenth. The conjectural belief that they might have two colons has been changed into one of knowledge, as shown by their independence in defecation. In the event of an autopsy, these colons will no doubt be found of small calibre, and quite abnormal as to length and direction. We are warranted in this belief by discoveries that have already been made in the examination of dead analogues. Even the single colon of a double monster is quite abnormal.

The boys are quite differently affected by changes of temperature. Giovanni requires less underwear than his brother, and will perspire freely on a hot day, while Giacoma has a dry skin. Either brother may be seized with an attack of coryza, as the effect of a direct wind-draught, when the other entirely escapes. They sleep upon the back—or, more correctly, each is in a dorso-lateral position, and places the side or back of his head upon the pillow. They usually sleep eight or nine hours continuously. For a change of position they sometimes turn over upon their abdomen for a short time, but never sleep in this form of decubitus.

A prick with a pin in the median line of union is felt by both brothers, but the sensation is lost to one twin in passing to either side. The penis is said to have a sensation common to each, and the scrotum has a partial one beyond the median line. It is claimed that one twin feels a little when his brother's testicle is touched, which I believe to be an error, the sense being in the skin only, as the testicles are supplied with nerves through the inguinal canal. The penis and testicles are in an undeveloped state, being small for their age. The penis becomes erect, but the boys have no knowledge of its sexual function.

The two legs are entirely independent, and each belongs to, and is controlled by, the boy whose head is on the same side. One boy does not feel a touch upon the other boy's leg, and has no power, by his will, to give it the least motion. It is possible that the twins might balance themselves so as to stand, as their Scotch analogue is said to have done, if the leg and foot of Giacoma were as well formed as those of Giovanni, and had the same degree of strength that the latter appears to have.

Whether the boys have two separate livers, or a double one with two gall-bladders, has not yet been ascertained, for want of permission to make the required examination. Having two bladders, they may have two pairs of vesiculæ seminales, but are more likely to have one to each bladder, with one vas deferens and one ejaculatory duct, as this would be in correspondence with the existence of one testicle to the owner of each bladder, and one urethra for the exit of the ducts. I find no reference to the seminal vesicles in any reports of autopsies made in male analogues.

With regard to other viscera, we can only form an inferential opinion, as follows: The spleens are small, and located right and left to correspond with the positions of the stomachs. The pancreases have their heads facing each other, to correspond with the curve of each duodenum. The kidneys are in two pairs, the outer being large and the inner being small, or, perhaps, rudimentary. It is rare to find

no trace of the two inner kidneys where the spinal columns are well separated so as to give space for them.

I see no reason why these Tocci boys may not live a number of years yet. Giovanni is the stronger, mentally and physically, but the difference is not much marked, and no special element of weakness likely to shorten life appears to have been discovered in Giocomo. They have both learned a certain measure of French and German, and can both sing, Giovanni having the higher-pitched voice. One of the Scotch twins, already mentioned as having reached the age of twenty-eight, is recorded as having been quite stupid when compared to his brother. We have no such difference to record here.

NERVE STRETCHING IN THE TREATMENT OF PERFORATING ULCER.

Dr. McLeod in the last number of the *Indian Medical Gazette* records the notes of an interesting case of nerve stretching for anæsthesia and perforating ulcer in which considerable benefit had resulted. The patient was a Brahmin, aged about 40, who on admission into hospital stated that about a year ago he suddenly lost sensation in the toes of the left foot. Two months subsequently to this he sustained a wound of the sole of the same foot, opposite the first and second toes, which became sloughy and refused to heal. On admission a deep sloughing sore on the ball of the foot about the size of a rupee was present. The three inner toes were dusky and swollen, and a small unhealthy looking ulcer existed on the inner side of the second toe. The whole of the dorsum of the foot was completely anæsthetic and the anterior third of the sole. The anæsthetic area extended from the anterior aspect of the leg as far as its middle-third. The external popliteal and musculo-cutaneous nerves were found to be thickened. After giving a fair trial to art and antiseptic dressing without effect, these nerves were cut down upon and stretched. The wounds healed by first intention, and the following results have been obtained:—1st. Recovery of sensation over the anæsthetic area—the feeling is somewhat duller than normal, but there has been an undoubted restoration. 2d. Rapid cicatrisation of the ulcers. 3d. Subsidence of the swelling and restoration of the skin to its normal appearance and texture.—*Med. Press*

WATER AS A THERAPEUTIC AGENT AND ITS VALUE AS AN ELIMINANT.*

By C. M. FITCH, M. D.,
CHICAGO.

In presenting this brief paper to the Pathological Society, I wish to remark in advance that I have made no attempt to say anything new; I only seek to invite from members criticism and suggestion in regard to the employment of a therapeutic agent with which you are all familiar, yet the value of which I believe that few, if any, of us fully appreciate.

For the most part nature does her work in a very simple fashion. All general laws are simple laws, and the general law of medicine is *regular nutrition.* Perfect health is perfect nutrition, but nutrition cannot be perfect unless there is complete elimination, a thorough carrying off of all products of tissue change. This is one of its essential conditions. But if *health* is perfect nutrition, then disease, general or local, must be impaired or perverted nutrition. And I believe that in a vast majority of cases it will be found, that the first stage of impairment of nutrition is faulty elimination. Dead material must be removed from tissue to make place for the living. It is not enough that we introduce nutritive elements into the blood, the tissues must also be in condition to appropriate the nutritive material offered them. It is a law of physics that two bodies cannot occupy the same space at the same time. The tissues cannot receive a due supply of nutritive matter until waste matter has been duly washed out of them. Tissue filth must make place for tissue food. The more thoroughly this is done the more actively can repair go forward. Water is the agent by which this important work is accomplished. It is the universal solvent, and to do its work thoroughly the solvent must be in *amount sufficient* to dissolve the material presented to it for solution. So far as the intent of this paper is concerned we may of course regard an emulsion as a solution.

Now the more rapidly combustion goes forward, the more rapidly must its products accumulate in the system, the greater will be the amount of water re-

*Read before the Chicago Pathological Society.

quired to dissolve and carry them off, and the more important it will be that an extra amount of water should be introduced into the circulation. If the oxidized products of the high temperature in typhoid or scarlatina could be carried off as rapidly as formed, the gravity of these diseases would be greatly lessened.

Although this paper professes to deal only with water as an eliminant, it may not be altogether out of place to refer to the methods by which the amount of water required may be lessened, that is, to those methods by which temperature may be kept down, combustion rendered less active, and its products less in amount. Here we have the application of cold, the use of modern antipyretic medicines, calomel, and that most powerful antipyretic of all, blood letting, which Dr. Gross mourns as a lost art. I am old fashioned to believe that this is the only rational treatment for pneumonia, and I do not believe the time far distant when this will again be the standard treatment in the first stage of this grave disease.

But use what methods we may to control temperature, there must in all inflammatory diseases be an abnormal amount of tissue change, and as a consequence an increased amount of water will be required to carry off the products of such change. In the olden time, when water was forbidden in fevers, the then high mortality from fevers would have been higher still but for the amount of water given with the medicines and as medicine. The doctors were really doing a right thing, but in a very disagreeable way, and without knowing what the right thing was that they were doing. Now we recognize the fact that in many cases the real medicine, the actual therapeutic agent, was the water, and we do not think it necessary at this time to give water in some repulsive decoction.

When I first entered upon the practice of medicine, hydropathy was at its flood tide of popularity, and I could not but know of some good work done by it. Wood, in his practice of medicine, refers to the success of the measures of hydropathists in chronic rheumatism, but these measures were often carried to excess, and it was so obviously unreasonable to employ one therapeutic agent to the exclusion of all others, that hydropathy pure and simple, gradually lost ground. But long before the time of Presnitz, indeed from the very infancy of medicine, the therapeutic value of water had been distinctly recognized by some of the closest observers, though probably none of the old observers knew how it did its work. The good effects of the various medicinal springs, shown so unmistakably in very many cases, come not alone from the rest and change enjoyed by the visitors at such places, still less from the salts which these waters contain, but from the very large quantity of the water drunk, supplying in sufficient amount the solvent necessary to take up and carry off from the system the accumulated products of oxidation. The salts may do, and often doubtless really do some good, but the chief benefit, I believe, is always due to the pure prot-oxide of hydrogen itself. Even in anæmia, where ferruginous waters are employed, the benefit gained is not due to the *iron* alone, but also to the elimination of the oxidized or *partially* oxidized products that have accumulated in the system.

And here we come upon another physiological fact connected with elimination, that should never for a moment be lost sight of. Products completely oxidized are much more soluble than the products of partial oxidation, urea much more soluble than uric acid and its salts, consequently while a moderate amount of water may suffice to remove perfectly oxidized waste, a very much larger quantity will be needed to dissolve and carry off the products of partial oxidation. Here we must employ forced elimination if we would do good work. Wherever oxidation is perfect we have water eliminated by the lungs and urea by the kidneys, but if the combustion has been imperfect, we shall have the uric acid salts present, and wherever this is the case our line of work will be pretty clearly marked out for us. For this reason in all inflammatory conditions the character of the urine should be carefully noted. It will not be out of place to say here, that I have for years been more and more strongly impressed with the fact that much of the sickness among young children is due to an insufficient supply of water. Few mothers ever think of giving a feverish fretful babe a little water, but put it to the breast instead.

In the case of "bottle babies" the thing is as bad or worse. I have more than once been surprised at the improvement that I have seen take place in ailing babies sim-

ply by giving them their food at regular intervals, and giving them a little water between times. As a rule the child's digestion will improve at once, and this improvement will be due not alone to the fact that the child is getting less food, and getting it at regular intervals, but also to the fact that more perfect elimination has been established. The water also quiets and satisfies the child, and makes regular feeding possible.

But the more especial purpose of this paper is to suggest the help we may have from water in the treatment of acute rheumatism, and of the more virulent poisons of scarlatina and diphtheria. For the first twenty or twenty-five years of my practice my experience with rheumatism was unsatisfactory enough. Sometimes patients would get along as well as I could wish, but I had the discomfort all the while of feeling that I did not know whether it was my treatment that was benefitting them, or whether they might not have got along just as well without me. Then I felt that I could never even guess at the length of time a rheumatic attack was likely to continue, and was haunted by the fear of valvular heart lesion as a possible result. I think I was reasonably well posted in the literature of rheumatism, and tried, and tried faithfully the then most approved methods of treatment.

It was not, however, until after I had learned the importance of thorough elimination and especially the value, of water as an eliminant, that I began to be at all satisfied with my results. I learned the value of blue mass and of podophyllin, as I had gained from these, results more prompt and decided than I had secured in any other way, but I soon learned too that something more than these was needed to maintain for a sufficient length of time the elimination necessary. I was disgusted with trying to neutralize the poison, whatever it might be, and was convinced that it must be washed out of the system. This was about the way I felt when salicylic acid was proposed as a remedy, and I tested it from the first, but almost from the first used it in connection with large draughts of water. I feel now as if we had finally developed a rational and effective treatment for rheumatism—a treatment upon which we can rely almost as confidently as we can upon sulphur to cure the itch. Indeed, I am compelled to confess, that in the treatment of rheumatism I have become almost a simple routinist. In every case, or nearly every case, my first step is to secure free catharsis, giving almost invariably some mercurial purgative, blue mass with podophyllin, or if much fever is present, calomel with soda and rhubarb. This is to be taken at bed time, and in the morning after the purgative has acted, I begin the use of salicylate of soda, with copious draughts of hot water. I give a 10 or 12 grain dose of the salicylate, with a large draught of hot water, every half hour till 6 or 8 doses have been taken, or until the stomach refuses more water. The patient should, of course, be in bed warmly covered. In a very short time, almost invariably within an hour, the patient will be in most profuse perspiration, drenched in his own sweat, as if he had been dipped into a bath tub, and this sweating will usually continue two, three or four hours after the last dose of the salicylate has been given. But a noteworthy fact in this connection is, that the patient is rarely exhausted by this profuse and continued perspiration. The sense of relief is usually so marked that the patient will not only feel no exhaustion, but will not unfrequently say, that he feels actually stronger. This, however, is not always the case, though I do not remember ever to have met with a case of extreme exhaustion.

This sweating process is usually to be repeated on the second and third day, though it will, as a rule, be sufficient to give the salicylate and hot water every hour for three or four hours, instead of every half hour as on the first day. I might add, that it is often well to put a little lemon juice into the water, or to give it as a cup of tea, if the patient rebels against plain water. This treatment will, in a very large majority of cases of acute rheumatism, be found entirely successful, though the course may sometimes need to be repeated.

In inflammatory attacks occuring with patients of special rheumatic diathesis, or suffering from chronic rheumatism, this treatment is, as might be expected, less successful, but even in these cases it often gives a very marked relief. In these cases, however, we must never forget to give the liver due attention. Where it becomes necessary to make use of iodide of potassium this remedy also should be given with

abundant draughts of water, though it may be impracticable to keep the patient in bed or to use water freely enough to cause perspiration. The water however promotes the action of the iodide upon the kidneys and thereby effectively aids elimination. It may be well to add here that for the last two or three years I have adopted a similar treatment in quinsy. The idea, I believe, originated with Dr. Knox, who suggested the use of salicylate of soda. I have no means of knowing how far the salicylate of soda, or how far the water may have to do with my results. I only know that this treatment has been far more satisfactory than the treatment I had heretofore followed, and that since adopting it I do not remember to have had a single case of tonsilitis resulting in abscess, and the attack is usually promptly aborted. But although water, as I have suggested, is one of our most effective remedies in rheumatism, its use is by no means limited to this harmful affection.

In diphtheria and scarlet fever it is one of the most valuable if not *the* most valuable of all therapeutic agents. Perhaps the same is true in all self-limited fevers due to a specific poison. When, if ever, antidotes shall be discovered capable of neutralizing these poisons water may cease to have less relative importance in their treatment, but so long as we have to get rid of these poisons by elimination, water must continue to hold its place as a remedy of the first rank. It is in diphtheria that I have made the most thorough test of the therapeutic value of water. In treating this disease I keep two special objects constantly in mind. *Local disinfection* and *general elimination.* I seek from the first to prevent by any means in my power, any increased accumulations of the poison in the patient's system. I give calomel at the outset, stop all food, especially all *nitrogenized* food as I do not wish to add to the already overwhelming amount of work awaiting the kidneys, and from the first dose of the mercurial begin the free use of water. After the calomel has acted, I frequently begin the use of salicylate of soda, but all the while with the free, *very free* use of water. If from the severity of the throat lesion, the child has difficulty in swallowing or refuses to take water, then I give enema of warm water every hour at the least, giving all that I think the child can possibly retain, and directing the nurse after each enema to maintain pressure upon the anus to secure retention of the water.

At the same time that I am doing this, I try to effect local disinfection by the free use of peroxide of hydrogen. This agent while a powerful oxidizer, a most efficient disinfector, has the great advantage of not being poisonous or not acting but in a very slight degree upon living tissues. For this reason its employment may be almost continuous, by frequent gargling where the patient will use a gargle or with the atomizer when the child is too young or too perverse to gargle. It should be used at the least as often as once an hour, not only to the throat but in the nares also if necessary. It is hardly necessary to suggest that in consequence of the oxidizing properties of the peroxide, atomizers with metal tubes should not be used.

If the membrane be very dense and fails to separate under the action of the peroxide, other means for its removal may be employed to the end that the disinfecting action of the peroxide may be more effective. Exception may possibly be taken to what I have said in the matter of withholding food in the early treatment of diphtheria. It may be said that the patient must have food to keep up his strength, but it is to be borne in mind that the debility in early diphtheria is not the debility of exhaustion, but the debility resulting from the action of a depressing poison, and we do not relieve the debility by increasing the quantity of waste products in the system, the volume of the depressing poison. No, our work from the first must be elimination—elimination the more thorough the better, and after we are satisfied that we have the disease so far under control that the poison is not only not gaining on us, but that we are removing it faster than it is forming, then we can consider the question of food. If the child desires food, he can have it in moderation, or later on if there is a danger of true exhaustion, food and stimulants can be pressed.

I have no wish to weary this Society with the clinical history of individual cases, but I would like to refer to three cases in one family which came under my care last week. All were severe, and one of them at least seemed malignant in type —high fever, dullness, great depression and apparent invasion of the nares by the

diphtheritic inflammation. In this case—A boy nine years old, I gave three powders with a grain of calomel and two of soda in each powder, giving one powder every two hours, with all the warm water the child could be made to drink. Fortunately he could be made to drink freely. He was in a free perspiration before the calomel acted and after catharsis had taken place he appeared decidedly better. The following morning—5-grain doses of salicylate of soda every hour, still with hot water, till he was again sweating freely, all this while also using the peroxide freely in throat and nares. The other two cases were treated similarly, but less heroically, and all are now doing well, appearing, in fact, like cases of a mild type. I should add here, that a day or two after this paper was read, one of these little patients, the one whose case at the outset seemed most promising, died very suddenly from strangulation, apparently from closure of the larynx by a flap of dense partially detached membrane. I have little doubt that if any one had been at hand to render prompt aid, this result might have been averted.

Since adopting this general plan of treatment, a little over three years ago, though I have not till lately been using salicylate of soda, I have treated between 40 and 50 cases of true diphtheria, and have lost three cases. In one of these cases, a child, four years old, was recovering from whooping cough. The lungs were still very weak and a diphtheritic bronchitis developed, extending through both lungs. In the second case it was impossible to secure anything like faithful and intelligent co-operation on the part of the parents, and in the third case, that of a boy six or seven years old, who had never been taught to mind, and who from the first would permit nothing to be done for him without a fight, continued till he was exhausted. When finally the disease seemed broken, when the membrane had wholly disappeared from the throat, when to all appearance an ordinary child would have been out of danger, this youngster from sheer ugliness, or a perverse unwillingness to do anything that he thought he was wanted to do, refused food, stimulants and even water, fighting for all he was worth when any attempt was made to force anything on him, till he ultimately succumbed to heart failure, the result of sheer exhaustion. I have no doubt that a little brandy and water willingly taken would have saved him. This is certainly a better record than I could have shown in the earlier years of my practice, when I crowded food, used iron, chlorate of potash, quinine, etc., etc. I did this for thirty-five years, not because I was entirely satisfied with the treatment—for I could not be—but because it was the usual treatment and I could think of nothing better.

I wish here to say that I am not prepared specially, to advocate the use of salicylate of soda, as I do not know how far the good results in cases where I have used it, were due to this salt, and how far to the water simply. This much however I do know, there is no other remedy under heaven that I would use to the exclusion of the *free* use of water.

I wish here again to emphasize what I have already said in regard to food, especially nitrogenized food in the early stage of diphtheria. It seems to me self-evident that the introduction of food into the stomach must have one of two injurious results—either it remains in the stomach undigested, or if taken into the circulation, must add its oxidation to the volume of waste matter to be discharged by the already overworked kidneys and so add greatly to the danger of the disease. Of course in the more advanced stage of diphtheria or in any protracted fever we must give food, but not in the early stage or while a high temperature is present.

Before leaving the subject of water in diphtheria, I wish to refer to one case where I feel confident that the use of water by the bowel saved the patient's life. It was a case that was under the care of my son and myself in the early part of the present summer, where intubation had been performed by Dr. Waltham when it was evident that without it the patient, a child between two and three years of age, could have lived, but a few hours. The operation, most skillfully performed, gave immediate and great relief so far as the breathing was concerned, but still the child grew worse. The child could of course take a limited amount of water by the mouth, the urine became more and more albuminous, and finally the kidneys ceased acting altogether, and for thirty-six hours no urine was discharged. But all this time we persevered in the use of water by the bowel, until finally the kid-

neys resumed their work, copious diuresis ensued, and the child continued to gain steadily and quite rapidly in most respects, although we had a diphtheritic paralysis of the lower limbs that lasted six or eight weeks. I had never before witnessed recovery in so severe a case.

In scarlatina we may have a pathological condition closely analogous to that here described in diphtheria, a condition where free elimination alone can save the patient's life. Here our remedy is water, water by the mouth or water by the bowel, as the case may be, but water all the time. I have had it objected to this treatment that it is dangerous thus to crowd the kidneys, that they will be exhausted and cease to act, but the congestion of the kidneys in these cases is not due to the amount, but to the kind of work they have to do; it is due to the excessive amount of poisonous material passing through them, and the more concentrated this poison, the more irritating will its action upon the kidneys be. Our safety, then, is in diluting it. It is a good deal easier to pass a quart of molasses and a gallon of water mixed through filter paper than to pass the molasses alone, and the urine in this case is not only dense, but acrid and poisonous. So I say again, our safety is in diluting it. I believe that many lives have been and are being lost from an inadequate appreciation of this fact. I certainly can recall more than one case in my own practice where I believe that I might have saved a patient's life had I understood the action of water then as well as I think I understand it now.

I have already, in the early part of this paper, alluded to methods of controlling temperature so that we may control also the volume of the oxidized waste that must be carried off. Obviously elimination cannot be crowded beyond a certain limit, and the saving of the patient's life may depend upon our so far controlling temperature, controlling oxidation, as to keep the volume of resulting waste within this limit. This is a matter of which we should never for a moment lose sight.

It would be interesting to study the action of water as an eliminant in some diseases other than those I have thus far named, but this paper is already longer than I had intended, and I will no longer trespass upon the patience of the Society.

A CASE OF SURGERY OF THE LIVER.*

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The comparative rarity or perhaps the want of recognition of hydatid cysts of the convex surface of the liver, and the additional fact that only very incomplete descriptions of them are to be found in the many valuable works on surgery published in this country, have prompted me in presenting a few clinical notes on the subject.

The following case is of interest to the physician as well as to the surgeon, not only on account of its diagnostic features, but as illustrating the value of the radical treatment advocated of late by the surgeons of Australia and France:

The notes of the case are as follows:

M. B., aged 29, native of France, a sheepherder for the past four years. No hereditary or personal antecedents of importance. No history of impaludism, dysentery or syphilis.

During the summer of 1888, he began to complain of very severe pain in the region of the liver and in the right shoulder, greatly intensified when reposing on the corresponding side. Occasional attacks of coughing and dyspnœa were also referred to. Large and repeated blisters were prescribed by the physician who examined him at that period. The preceding symptoms increased gradually in intensity, incapacitating him for any constant or hard labor.

November 16, 1890, he entered my ward in the French Hospital, complaining of dyspnœa, a sense of tension in the right side and a severe dry cough.

Examination.—On inspection, considerable distension was noticed in the right costo-diaphragmatic region, with diminished motion during respiration. Careful mensuration showed a difference of three inches in favor of the right side.

Palpation and percussion demonstrated the absence of vocal fremitus and the presence of great tension and well defined dullness in an area extending posteriorly as high as the sixth rib, laterally to the level

* Read before the State Medical Society of California.

of the fourth rib and anteriorly obliquely downwards to the lower third of the sternum, the upper limit of dullness being represented by a convex line. The anterior border of the liver appeared regular, occupying a line parallel to and one and a half inches below the tenth rib.

Auscultation showed suppression of respiratory murmur in an area corresponding very much to the one just described. Above this area the respiration was weak as compared with the murmur on the opposite side. Slight friction sounds were detected in a space corresponding to the right costo-diaphragmatic pleural cul-de-sac.

The results furnished by percussion and auscultation did not vary with the numerous different positions given the patient during the examination and very little if at all through respiration. Heart normal, slightly deviated to the right. Examination of urine negative. Temperature normal, pulse 84, respiration 26. Patient weighed 140 lbs., having lost 15 lbs. during the previous six months. General condition poor.

A diagnosis of hydatid cyst of the convex surface of the liver was made and aspiration advised.

December 24th, after having thoroughly cleansed and disinfected the skin I aspirated with a Dieulafoy needle (No. 2) choosing the sixth intercostal space, in the anterior axilliary line. About five litres of a clear, transparent, non-albuminous liquid were evacuated. It contained traces of sugar and had a specific gravity of 1010. (The first few microscopical specimens showed no traces of either scolices or hooklets, but some of the latter were finally found after allowing the liquid to deposit for several hours.) The patient's condition was immediately rendered much more comfortable, but improvement was of very short duration; on the sixth day the patient had a well pronounced rigor followed by hyperthermia. Percussion gave evidence of re-accumulation of liquid and the noctural temperature showed an exacerbation of 3°, pulse 116, respiration 28. Complete anorexia.

Radical interference was clearly indicated. Preference was given the pleura-diaphragmatic route rather than the peritoneal route, (1) in order to explore the pleural cavity and ascertain if it had been infected by the suppurating cyst; (2) to obtain the maxium space possible in view of a radical operation.

Operation: January 1st, 1891.—Assisted by my excellent interne, Dr. Borde, I incised the sixth intercostal space, five inches in length, slightly in front of the axillary line. After resecting, by the subperiosteal method, two inches of the sixth and seventh ribs, the pleural cavity was opened and found to contain about two ounces of a serous liquid in which ulterior microscopical examination showed numerous leucocytes. The lung was apparently collapsed and retracted against the vertebral column. After shutting off the pleural cavity as well as possible by means of a large sponge, the diaphragm and the subjacent cyst were incised and three litres of pus evacuted together with remnants of numerous daughter cysts. The cavity was then irrigated with a 1/3000 solution of bichloride of mercury. Gradual traction enabled me to remove the cyst *en masse* without causing any hæmorrhage. The remaining cavity was then explored by the introduction of the entire hand. At a point two inches to the right of the xiphoid appendix, I noticed something doubtful, perhaps a second cyst, about the size of a goose egg, surrounded by apparently normal hepatic tissue. Owing to its great depth and doubtful nature I decided to let it alone, a grave mistake as the evolution of the case clearly demonstrated afterwards. The cavity was finally washed out and two large drainage tubes inserted. I succeeded in partially excluding the pleural cavity by approximating and suturing the costal and diaphragmatic pleural surfaces above the incision intersecting the diaphragm and introducing a small drainage tube as a precaution.

Two-thirds of the external wounds were closed by silk sutures and a dry sublimate dressing applied.

Duration of operation, one hour and twenty minutes. The immediate results of the operation were very favorable with the exception of a temperature of 104° during the first night. On the following morning the temperature was normal and remained under 100° during the first week. Antiseptic irrigation was resorted to daily, washing out a small quantity of pus from the hydatid and pleural cavities, the capacity of the former measuring 100 grams on the 8th day. The second week was

marked by abundant suppuration and hyperæmia. At the termination of of the fourth week, the patient had a severe chill followed by a sudden rise of temperature (104°), depression and anorexia.

Symptoms of septicæmia developed during 14 days, being followed by an abundant discharge of pus from the deepest portion of the hydatid cavity. The same clinical tableau recurred shortly afterwards and covered a period of three weeks. Patient had lost 52 lbs. From the end of the second month convalescence was uninterrupted. The patient rapidly regained his normal weight and could have been discharged cured but for a fistulous tract 5 inches in depth, and one-eighth of an inch in diameter.

At various and repeated intervals I endeavored to close this fistulous tract but it proved rebellious to all methods of treatment. Curetting, scarification, cauterization by means of the Paquelin or acids; antiseptic, stimulating and histogenetic substances were successively resorted to with very limited benefit.

Discouraged with these poor results, I again chloroformed the patient and, with the curette, tripled the diameter of the entire fistulous tract. At the same time, by resecting a half inch from the free extremities of the 6th and 7th ribs and removing the surrounding cicatricial tissue, an attempt was made to have the skin collapse under pressure and exclude the external half of the tract. This expedient proved beneficial but the deep portion of the tract progressed very slowly. A small incandescent lamp enabled me to examine the parts thoroughly but revealed nothing of importance.

At the present time the fistulous tract, although considerably diminished in size, has not entirely healed; it measures one and one quarter inch in depth. The patient's present weight is 155 pounds, his general condition remains excellent.

The time allotted me is too limited to analyze and determine the relative value of the diverse symptoms of hydatid cysts involving the convex surface of the liver, but I wish to call attention to a few diagnostic signs given prominence in recent publications.

In cases where the results of percussion and auscultation simulate those of a small pleuritic effusion, (600 grams for example), Dieulafoy very judiciously states that were the liquid of pleural origin, no deformation, tension or sense of restriction in the costo-diaphragmatic region would be noticed. Whereas in the case of hydatids, the deformation would equal that produced by a very large pleuritic effusion (3,000 or 4,000 grms.) In such cases the importance of careful inspection can not be over estimated. Another diagnostic sign of considerable value is the co-existence of extensive thoracic dullness and friction sounds in the right inferior pleural cul de sac.

Pain in the right shoulder is mentioned in numerous observations. The so-called pathognomonic "hydatid fremitus" or "thrill" (Frerichs) is exceedingly rare; some eminent physicians even deny its existence. The patient's occupation may constitute a strong presumption, as in the present case. Urticaria is referred to by French authors as a frequent sign of hydatids.

More often observed in abdominal cases, it is sometimes met with in cases affecting the convex surface of the liver. Debove's recent experiments relative to the pathogeny of urticaria demonstrated that it is the result of an auto-intoxication caused by the absorption of the hydatid fluid.

In my opinion the exploring needle should be used only as a last resort in the diagnosis of hydatid cysts. The dangers resulting from its use are decidedly more numerous and more serious than in pleural affections and the hooklets can not always be found in the liquid withdrawn.

Authors disagree regarding the treatment of hydatid cysts of the liver. Some incline toward methods which might be called medical (simple aspiration or associated with injection, electrolysis, etc) while others resort to surgical interference.

Tapping, although a very simple manœuvre, is not devoid of danger; the physician should remember the possibility of suppuration of the cyst from external or internal infection, the possibility of sowing scolices broadcast over the surface of the peritoneum or pleura, or inducing sudden collapse or suffocating the patient by rupturing a tight cyst into a bronchus. Antiseptic injections constitute a decided advance in the treatment of these cysts, but I am positively in favor of surgical measures in large cysts, especially in those of the convex surface of the liver.

Recamier's method, *id est*, the prelimi-

nary use of caustics, is of interest from a historical point of view only, its results having proved disastrous.

Bégin's or Volkman's method of operating in two stages, although rather successful in the hands of several German surgeons, has succumbed to the fate of gastrostomy in two stages, being now considered superfluous. It is moreover difficult to understand the rationale of this operation, for nothing can be gained by its adoption in cases uncomplicated by pus, whereas the presence of pus constitutes an indication for immediate and expeditious interference.

The radical operations may be summed up in two classes: 1st. Incision and evacuation with or without drainage. 2nd. Extirpation.

The numerous statistics due to Australian surgeons prove conclusively the superiority of total extirpation over all other methods, especially in the group of cases under discussion. Total extirpation comprises the removal of all daughter cysts and mother cyst at the time of the incision.

This procedure is comparatively simple: after withdrawing the liquid, the elastic lining shrinks and can be extracted by means of gentle traction with forceps.

One great advantage of this method is that "when collapse of the walls of the hydatid cavity is possible so as to allow apposition, the surfaces will directly unite by a process analogous to the primary union of wounds." (Verco).

Another argument in favor of total extirpation is the facility thus derived to explore for deep cysts, which as Terrier has demonstrated co-exist frequently with the superficial variety.

It was at one time argued that total extirpation was liable to induce hæmorrhage. That this statement is erroneous is amply proved by the absence of organic connections between the hydatid membranes and the adventitious capsule that surrounds them.

PRURIGO.

℞ Acid carbolic. crystall..... 2 grammes.
Alcohol ..... 10 "
Glycerin..... 20 "
Aq. dest..... 200 " —M.

Or,

℞ Chloral hydrat. ..... 3 grammes.
Alcohol..... 20 "
Aq. dest..... 30 " —M.

—Hillauet and Gaucher, *D. Med. Zeitung.*

REPORT OF A CASE OF TRAUMATIC TETANUS TREATED WITH LARGE DOSES OF CHLORAL.

By J. B. THOMPSON, M. D.,
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Fredrick Falter, robust German, aged 23, on Tuesday Oct. 27, stepped upon a nail which penetrated the ball of right foot. A simple domestic dressing was applied and the wound healed in about a week. Ten days after injury he noticed stiffening of jaws. Growing worse, I was called two days later, when undoubted symptoms of tetanus were present. The jaws were quite rigid, allowing about an eighth of an inch motion, which no reasonable amount of force could overcome. He complained of soreness of back and neck, which muscles were somewhat contracted and stiffened.

I gave him Potass. Bromide, 15 grains every 3 hours without benefit. The following day Dr. Krammerer saw the case in consultation, when chloral 15 grains every 2 hours was decided upon. At this time, the fourth day of the disease, the abdominal muscles also were in a state of tetanic contraction, altogether setting the trunk of the patient as if in a cask.

The fifth day he was given 20 grains of chloral every two hours, omitted occasionally when asleep. The patient sucked the medicine and nourishment through a rubber tube with a wooden mouth piece. Enema given, which caused the bowels to move naturally.

On the sixth day of the disease, sulphate of physostigmine was given alternately with chloral omitting a dose of chloral, commencing with $\frac{1}{30}$ increasing $\frac{1}{33}$, $\frac{1}{25}$, $\frac{1}{20}$ to $\frac{1}{12}$ grain doses; seemingly fast losing its power was discontinued in two days. On the sixth day the chloral causing so much pharyngeal irritation it was given by enema in a cup of warm milk or beef tea and egg, 50 grains at a dose, repeating only when symptoms demanded, usually in five to seven hours, the signal being more severe and frequent attacks of general spasm, becoming almost constant and which if not controlled promptly would cause the patient to become frantic with pain and dyspnœa. The chloral by enema would control these usually in fifteen or twenty minutes. On the sixth to eighth day,

morph. sulph. in ½ grain doses was given alternately with the chloral, four doses of each sufficing for twenty-four hours. Nov. 19, the ninth day of the disease, undoubted evidences of cerebral congestion supervening, physostigmine was again tried with morph. sulph. and potass. bromide, as follows: At 11.30, 40 grains chloral were given; at 5. 15 p. m., ½ gr. morph. sulph. hypodermically and 30 grs. potass. br. by enema; at 8.30, 30 grs. potass. br. which was rejected. Being more restless ½ gr. physostigmine was given without benefit; at 9.15, ½ grain morph. sulph., which gave partial relief; at 11.30, just twelve hours after last dose of chloral, being satisfied that without physostigmine or morphia it would control the spasm, 40 grs. chloral was given, but patient had become so frantic that it did not give complete relief and morphia was given in one hour and chloral again in five hours, (4.45 a. m.), which did not have to be repeated till 11 o'clock that day. The treatment thereafter was morphia and chloral alternately, the chloral lasting twice as long as the morphia. It never became necessary to increase the dose above 40 grs. and never oftener than once in 6 or 7 hours if alternated with morphia. On the 12th day the dose was reduced to 30 grains which was not satisfactory, and the 40 gr. dose was returned to.

Up to the eleventh day the temperature had not risen above 99.5°, and as the masseter and abdominal muscles were relaxing, the back also becoming less rigid, hopes of recovery were entertained. This day, however, the temperature reached 101° and caused some anxiety, pulse hard and full 112 to 120; twelfth day some delirium, temperature 103° morning 102½° evening; thirteenth day temperature 103° and he was assuming the typhoid condition and was given 15 grs. antipyrine, which reduced it in four hours 1⅘ degrees. Pulse now 112 asleep; 126 awake. This day the diaphragm which had been doing all the work of respiration showed evidences of weakening while the auxiliary chest muscles had returned to partial use and were assisting largely. Now during an attack of general spasm, respiration would be entirely cut off, and was assisted artificially. This condition continued, becoming more typhoid until the close of the 15th day he succumbed. He took some days as much as 2 quarts of milk, besides other nourishment. The chloral was always retained if given by enema in milk, but not so surely if given in water or beef tea, and was always satisfactory in its action. The final known complication was the rise of temperature and dependent adynamia, induced probably by demoralization of the heat centre by the tetanic poison.

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Selected Formulæ.

APPLICATION FOR RHEUMATISM.

Hebbing is said to employ the following solution locally in the treatment of rheumatism:

℞ Salol,
Sulphuric ether..... āā ʒ i.
Collodion ..... ʒ i.

To be applied around the joints which are affected by acute rheumatism.

—*L'Union Médicale.*

OINTMENT FOR HÆMORRHOIDS.

℞ Antipyrin.
Salol..... āā 2 grammes.
Extr. belladonna.....0.10 "
Vaselin..... 15
Ceræ..... q. s.

M. Sig.: A piece, the size of a nut, to be introduced within the anus thrice daily.

A SALVE TO QUIET THE ITCHING OF MEASLES, SCARLATINA, AND CHICKEN POX.

Dr. Klein (*La Semaine médicale*, No. 4, 1892), speaks highly of the following:

℞ Pure anhydrous lanoline.....50 grammes.
Vaseline.....20 "
Distilled water..... .....25 "

Rub into the skin every three hours.

The evaporation of the water of this salve cools the capillary hyperæmia and quiets the itching.

TONIC IN MALARIAL CACHEXIA.

℞ Liq. sodii arseniatis.....ʒ j.
Ext. eucalypti fl.....ʒ iij.
Tr. cinchonæ comp.....ʒ jss.
Aqua cinnamomi, q. s.....ʒ iij.

M. Sig.—ʒ ij ter in die, in water, after meals.

STYRONE AS A DEODORANT IN ULCERATED CANCER.

℞ Styrone..... 4.00 grammes.
Glycerin.....30.00 "
Distilled water.....30.00 "

Sig.:—Externally.

—*Nouveaux Remèdes*; *Ibid.*

DIARRHŒA MIXTURE.

℞ Tinct. opii.
Tinct. capsici.
Spir. camphoræ.....āā fl ʒ ij.
Chloroformi purificati.....M xiv.
Alcohol, q. s.....ad fl ʒ x.

Mix. Dose.—20 to 40 minims

—*Squibb.*

ANODYNE LINIMENT.

℞ Olei origani.
Tinct. opii.
Spts. ammoniæ.
Olei olivæ.....aa oz j.

M. Sig.—Shake well before using. Apply with gentle friction.

A MILD ALTERATIVE TREATMENT.

℞ Potas. iodid..... .....ʒ iss.
Tr. gentian. comp.
Aquæ. dest.....āā ʒ ii.

M. Sig.—Teaspoonful in water after meals.

FORMULA FOR WINE OF COCA.

℞ Coca-leaves ..... 3 ounces.
Cognac.....1½ "
Sherry wine.....1½ pints.
Hungarian wine .....6 ounces.

Macerate for several days and add 7 grains of citric acid. Allow this mixture to stand for several days and then filter.

—*Pharmaceutische Post*, No. 27, 1891.

HOW TO ADMINISTER THE CHLORHYDRATE OF AMMONIA IN THE GRIPPE.

Dr. Marotte (*Le Bulletin médical*, No. 6, 1892) has found many persons to have difficulty in taking this salt in powder form, as it sometimes causes disagreeable burning in the stomach. In order to avoid this he administers it in a potion as follows:

℞ Muriate of ammonia..... 3 grammes.
Syrup of orange peel ..... 40 "
Rum ..... 15 "
Infusion of sage, ad .....250 "

A soup-spoonful every two or three hours. Increase the dose according to the severity of the disease.

FOR HÆMORRHOIDS.

℞ Atropinæ sulphat.....gr. iv.
Acid. tannic ... .gr. vj.
Morphinæ sulphat.....gr. vj.
Cocainæ hydrochlorat.....ʒss.
Vaselin.....ʒj.

M. et ft. ung.

S.—Apply a small quantity to the hæmorrhoid after each stool.

—*Rev. de Thér. Gén.*, No. 7, 1892.

CHRONIC DIARRHŒA IN CHILDREN.

Dr. F. Combemale (*La Semaine médicale*, No. 14, 1892) recommends the following:

℞ Extr. kola nut.....gm. 1 (grs. xv).
Syrup of quinces.....gms. 60 (fl. ʒij).

To be taken by the teaspoonful within twenty-four hours.

FREY'S EMULSION OF IODOFORM

℞ Iodoform..... P. 50 grammes.
Glycerine ..... " 40 "
Tragacanth..... " 25 "
Water ..... " 10 "

A teaspoonful of this is added to a pint of water to be used as an injection in cystitis. Prof. Billroth terms a 10 per cent. mixture of iodoform and glycerin an "emulsion of iodoform." The iodoform should first be triturated with a little of a mixture of equal parts of glycerin and water.

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Leading Articles.

THE USE OF HYPNOTICS AMONG THE INSANE, WITH A REVIEW OF THOSE CHIEFLY EMPLOYED IN AMERICAN HOSPITALS FOR THE INSANE.

Although this subject is of special interest to those having practical relations with the insane, it will also perhaps be of interest to the general practitioner, because to him at times comes the responsibility and care of these unfortunate cases. Moreover, it is of the utmost importance that the insomnia of nervousness, incipient insanity or the first stages of decided mania or melancholia should be controlled by the best means which experience has pointed out.

In our opinion drugs are far more frequently resorted to for the purpose of inducing sleep than they should be, and not infrequently do they do positive harm in the treatment of insomnia. Many milder measures should first be tried whenever possible. Some of these are hot douches or baths followed by brisk rubbing with coarse towels, hot nutritious drinks at bedtime, care of the diet with proper stimulation in asthenic cases of mental disease, hot applications of the spine followed by galvanism of the spine, and many others of similar nature. At present, however, we have in mind cases in which these means have failed and in which drugs must be tried.

Although so much valuable work has recently been performed both in the discovery and clinical application of new hypnotic substances, the evil of the day seems to be that they are used without proper regard to their specific actions. This error is a most natural one in the case of all new medicaments. Naturally, one wishes to experiment with them with

the hope that at last the *ideal* hypnotic has been evolved from the crucible or still; yet after all we know that as far as the insomnia of mental disease is concerned we possess no one drug that is applicable to all cases, but that several drugs do exist which when properly used with due regard to their actions go very far towards affording us a specific. With the advent of each new hypnotic a vast wave of experimentation has swept over this country, and it is only when they have passed and broken that we are beginning to appreciate the proper places of these substances in their class. The enthusiasm with which such hypnotics as paraldehyde, sulphonal, chloralamide, etc., were received showed itself in the many papers that were published in our medical periodicals, full of unstinted praise to the favorite of the hour; but now the wise hand of Time has kindly modified many of these first impressions, and shown us both the virtues and faults of these various agents. This, however, is but partially true, for the greatest difference of opinion exists regarding some of them, and, if we are to place confidence in the published results, the greatest variance exists in their clinical effects when employed by different men. This being the case let us briefly review some of these drugs as intelligently as the diverse opinions will admit.

Before considering separately the most commonly used hypnotics it may be well to briefly refer to the indications for their employment in cases of insanity. These indications may be roughly grouped and summarized as follows:

I. In acute mania, acute delirious mania, acute epileptic mania before or after fits, and in the acute maniacal stages of general paresis or chronic mania. In these cases they are indicated to lessen motor and cerebral activity, to prevent exhaustion, to conserve the strength and to promote recovery when possible. It is in these states that hypnotics are urgently demanded, and are of the highest importance if sleep can be induced.

II. In the noisy states of chronic mania, late stages of general paresis and in the restlessness often attending convalescence from acute psychoses.

III. In the insomnia of acute and chronic melancholia for the purpose of aiding by rest the recuperative powers of the system. Here is it most important that the hypnotics employed leave a minimum of depressing after-effects, and also that they do not disorder digestion; otherwise they are better omitted from the treatment.

IV. In alcoholic insanity, periodic and circular insanity, and in primary or terminal dementia. The beneficial actions in these conditions being to quiet motor excitement and control the patient, as well as to obtain sleep with its good effects.

These are the chief indications which present themselves among the communities in American hospitals for the insane; for which every known remedy has been from time to time employed. It would be useless and beyond the scope of this mere sketch of an important subject to quote extensively from the voluminous literature respecting the several drugs to be alluded to, so that we only endeavor to offer certain facts which are of attested value:

I. *Sulphonal.*—This drug has been extensively tried since its discovery by Kast. It has been used in the insane by Cramer, who had "positive success" in 92 cases, with no instance of any unpleasant after-effects; by Schwalbe, who reports success in 66 per cent. of his cases; by Rabbas, who used it over 200 times with "good effect." Papers have been written in praise of it by such authorities as Ziemssen, Kast, Engelman, Oestreicher, Schotte, Schmey, Frankel, Mathes, Salgo, Rosenbach, Rosin, and others abroad, while in this country we have the contributions of

Flint, Wetherill, Sachs, Wilson and Hutchison, Griffith, C. M. Hay, J. G. Kiernan and many others.

Much difference of opinion exists at present concerning the value of this drug. There can, however, be little doubt of its efficacy in cases of insanity, although its slowness of action is a disadvantage to its use in acute cases. It is chiefly beneficial in cases of simple mania, mild restlessness, excessive "nervousness," and in all cases in which simple insomnia is to be overcome. It is practically useless in cases wakeful from pain, fever, cough, etc. In certain forms of light melancholia, and in the excessive nervous insomnia of alcoholism it is one of the best remedies, when it is well borne by the stomach. No better way has been found to give sulphonal than that suggested by Kast—in a half cupful of tea or light broth two or three hours before its effects are desired.

Jastrowitz, in a paper read before the Berlin Medical Society, places sulphonal second in the point of safety in therapeutic doses, chloral being in his opinion entitled to first place in this respect. He also thinks it the least efficient of all hypnotics, and liable to cumulative action. The experience in this country is against the conclusions of Jastrowitz, and the drug is being extensively used in cases of insomnia which do not demand a stronger remedy. It has been found repeatedly to produce sleep when other hypnotics have failed, but on the other hand in the experience of nearly everyone it is often uncertain in its action. There can be no doubt of its occasional toxic effects, which may be due to the slowness of its excretion, as well as to individual idiosyncrasy. The chief symptoms of poisoning are: mental torpidity, muscular weakness, giddiness, feeling of oppression in the head, cardiac weakness. These symptoms should always be a warning to stop the drug, since they may readily deepen into dangerous and fatal effects. Sulphonal acts best when given in a single large dose, which, at the beginning, should not exceed fifteen grains, and where it is to be employed continuously it is wise to allow frequent brief intermissions so that a possible accumulative action is avoided.

II. *Paraldehyde.*—This drug is exceedingly valuable in the insomnia of mental diseases, because besides its hypnotic action it is a circulatory stimulant and can freely be given in cases of cardiac weakness. Its disagreeable taste, the odor it leaves upon the breath for 10 to 18 hours after its administration, and its tendency to disorder digestion are its chief disadvantages. It is nevertheless, in our opinion, one of the most serviceable of all the hypnotics used in Insane Hospitals. It can be employed continuously for a long time without serious effects, although some rare cases of paraldehyde habit have occurred. Out of the many hundreds of cases in which we have seen this drug employed, only one case of paraldehyde habit has occurred, and that was due to an improper use of the remedy before the patient came under observation. It is more widely applicable to the insomnia of insanity than almost any other drug, and may safely be given in doses of 2 fluid drachms, and even as high as a half an ounce in severe cases of sthenic mania. It is, however, chiefly of service in the milder forms of mania, and in melancholic states, except when employed in conjunction with remedies to control higher degrees of motor excitability. Owing to its excessive pungency it should be given well diluted, so that the stomach may be as little irritated as possible. In epileptic mania it has been found very valuable, and has even been employed as a remedy for epilepsy and the status epilepticus by H. B. Williams, assistant physician of the Arkansas Insane Hospital.

III. *Amyl Hydrate.*—This substance has been extensively used in the same kinds of cases in which paraldehyde is of

service, but speaking generally it is inferior to it in its results.

IV. *Hyoscin.*—This is one of the most valuable drugs when it can be had pure. It is speedily useful in mild cases of insomnia, mania with insomnia, and great restlessness, and may be given in small doses continuously in certain forms of cerebral excitement, such as frequently occurs in the initial stages of general paralysis of the insane. In the wild frenzy of acute mania, it is also of great service in quieting motor activity and thus conserving the vital forces of the patient. Its disadvantage is its action upon glandular activity by which it injuriously affects nutrition.

V. *Hyoscyamine.*—The literature on this drug shows that it is extremely valuable in controlling motor excitement, but of less value as a hypnotic. The amorphous alkaloid is the more frequently employed, and has been given with benefit to acute maniacs in the stage of wild, uncontrollable excitement in doses of one-fifth of a grain hypodermatically. Reports from various asylums confirm this practise, and it would appear that such doses are exceedingly well-borne in the condition above named. Owing to the marked gastro-enteric disorder occasioned by the remedy it cannot be given continuously in chronic cases, and its chief value is to tide over the height of an attack of acute maniacal excitement, in whatever mental disease this condition may occur. Some writers have cautioned against its use in patients with feeble hearts, while others do not intimate trouble in this direction. Our experience in its employment in cases of mania has been that it acts promptly and satisfactorily when given to allay motor excitement with delirious mental exaltation.

VI.—*Morphine.*—The use of morphine in mental disease seems to be, judging from the available evidence, chiefly of value in melancholic states and as a soporific. Where there is a physical cause such as pain, cough, dyspnœa, etc., for insomnia aside from melancholia in any case, it is perhaps our best remedy, provided it is administered without the knowledge of the patient that he is taking it. The danger of establishing the morphine habit in these cases must be sedulously guarded against. Morphine is of comparatively little use as a hypnotic, except in combination with other drugs, such as chloral or the bromides. When given in asylum practise it is usually administered hypodermatically.

VII. *Chloral.*—Probably no drug is more extensively used as a hypnotic, antispasmodic and depressant than this. Among the insane it is commonly employed, often in combination with the bromides, to produce sleep in all cases where no contra-indication to its use exists. In the status epilepticus it has been found the best single remedy, and in such cases is usually administered by the rectum. From what is known of its physiological action upon the cortical cells of the brain it is probable that the sleep produced by chloral is nearer natural sleep than that induced by any other hypnotic. Its disadvantages are its depressant effects on the circulation, the necesary increase of the dose to maintain good effects, and the danger of the chloral habit.

VIII. *Chloralamide.*—This substance, which is intended to replace chloral, has been the subject of extended editorial notice in the issue of the REPORTER of March 5th, to which the reader is referred.

STATISTICS OF THE PASTEUR INSTITUTE.

At the general meeting of the Paris Pasteur Institute, which was held recently, a report was presented which showed that since the establishment of the Institute there has been a steady diminution in the death-rate of the cases treated. Thus in 1886 the precentages of deaths was 0.94; in 1887, 0.73; in 1888, 0.55; in 1889, 0.38; in 1890, 0.32; and in 1891, 0.19.

Book Reviews.

THE POCKET PHARMACY, With a Therapeutic Index. A Résumé of the Clinical Applications of Remedies Adapted to the Pocket Case, for the Treatment of Emergencies and Acute Diseases. By John Aulde, M. D., Member of the American Medical Association, etc., etc. New York: D. Appleton & Co., 1892. Price $2.00

This brochure has been written expressly to advocate the use of the pocket case containing twenty-four vials of tablets. The advantages claimed by the author for this addition to the small literature of the day, are; first, that it is a desirable mode of dealing with emergency cases; second, that the volume will prove of special aid to the young physician who he thinks is likely to become "rattled" when he attempts to write a complicated prescription at the bedside; and, finally, that the older physician will find it useful in the saving of the time required in sending the prescription to the drug store. The book is also stated to be a plea for smaller doses than those usually employed.

The contents consist of articles on the remedies selected by the author and comprised in the pocket case. These are arranged in alphabetical order; under each drug is a list of the diseases in which the remedy may be used, also arrranged alphabetically. Nothing is said of the physiological actions of the drugs, and scarcely any references are given throughout the work. It is simply a compilation of the chief indications for the drugs found in the pocket case.

As an emergency case the selection lacks many requisites and from a general point of utility is far from being what the average practitioner would likely adopt.

Both the conception and pretenses of the book will not, we think, meet with general approval, and while the author states that the case was made for the book the impression grows on one that the latter is more or less in the nature of an advertisement for a prominent pharmaceutical firm. It is unfortunate that the author did not render such an inference impossible.

HOSPITALS AND ASYLUMS OF THE WORLD. *Their Origin, History, Construction, Administration, Management and Legislation; with plans, etc., etc.,* By Henry C. Burdett. Four volumes. Vols. I and II. London: J. and A. Churchill, 1891.

The first two volumes of this extraordinary undertaking are devoted to asylums and asylum construction. The author, who has been for twenty-five years connected with asylum management as an official or as a director has collected a vast amount of material. Statistics of the capacity, methods, equipment aud construction of asylums in every part of the world are included. Discussions of the best plans for buildings, of the best disposition of patients for treatment. of training and training schools for attendants are all to be found here at appalling though infinitely useful length. Many ground plans are given in the volume on construction of the different types of buildings in use, and these are taken from many different countries. A thorough, reasonable and convincing argument is made for the "block system" of building or some modification of it.

A few headings of chapters will give a good idea of the extent of ground covered and of the minuteness with which the subject is treated: In the second volume among other matters there are considered at length— sites, construction, buildings, model plans, warming, ventilation, lighting, drainage, detached hospitals, farms, gas works, furniture and decoration and sewage irrigation of farms.

Our own country makes a poor showing. Most of our asylums have been built by architects with little knowledge of what the rest of the world had done in this direction, and their types are rather those of the hospital than of the asylum. In management, with two or three shining exceptions, we are scarcely less behind the times, and worst of all, because most easily corrected, there is scarcely an insane asylum in the United States which is not shown by its own reports to be dangerously and unwholesomely overcrowded.

STATE MEDICAL SOCIETY OF NEW JERSEY.

The one hundred and seventy-sixth Annual Meeting of the Medical Society of New Jersey, will be held at Atlantic City, on the fourth Tuesday in June, 1892, and will continue in session the following day. A special train will leave Camden on Tuesday at 12.15 p. m., for the accommodation of those who wish to attend the meeting.

WM. PIERSON,
Secretary.

Periscope.

THERAPEUTICS.

CHAULMOOGRA OIL IN THE TREATMENT OF LEPROSY.

Berge (*New Orleans Medical and Surgical Journal*, 1891) extols this remedy, and gives the notes of three cases in which it was employed with great benefit. The results seem remarkable. The dosage was ten drops of oil in a spoonful of water three times daily, gradually increased until forty-five drops three times daily were taken without disturbance of the alimentary canal, except in large doses, when the bowels were liable to be acted upon too violently. The author thinks the oil should be regarded as a specific. Its absorptive properties were manifested in a striking degree upon the tubercular infiltrations; it afforded relief to the nervous phenomena, relieved the anæsthesia, and restored health to the body and mind. Reliance seems to have been placed upon its internal administration, for it is stated that "the remedial properties of the oil externally have not been fully tested," and the author refrains from speaking about this question.

THE TREATMENT OF THE STATUS EPILEPTICUS

The *St. Petersburger Med. Wochenschrift* publishes an account of a method of treating the so-called "status epilepticus," which has been successfully adopted by Dr. Kerning. He gives the following particulars of a case treated by this method. A girl in the Obuchoff Hospital in St. Petersburg, after suffering a whole night from almost continuous epileptic convulsions, next morning was unconscious, but without any œdema of the lungs, and with a fairly good pulse. On the convulsions being renewed a hypodermic injection of 0.02 gramme of hydrochlorate of pilocarpine was given, and 1.5 grammes of camphor in an emulsion. Profuse perspiration followed, and the convulsions immediately ceased, but for an hour pulmonary œdema and collapse seemed imminent. These symptoms, however, passed off, and were followed by sound sleep and a good pulse. The patient was made to lie on her side to prevent annoyance from the excessive secretion of saliva.—*Lancet.*

THE TREATMENT OF INFLUENZA.

In a lecture on influenza, Baccelli stated that in cases marked by bronchial distress, concurrently with a feeble heart, camphor is decidedly useful in the first stage. Four grains of camphor in fifteen minims of olive oil may be injected beneath the skin every three or four hours. If camphor fail, injections of ether often succeed admirably. In other cases injections of strychnine, in doses ascending from a thirtieth of a grain every twelve hours, will often tide over a crisis. To sustain the vital powers hot wine may be given in small quantities at short intervals. In the gastro-enteric variety of influenza in the young and strong, ipecacuanha may be employed to induce emesis. When the respiration is embarrassed striking benefit is often derived from inhalations of oxygen.—*Lancet*, No. 3569, p. 220.

TREATMENT OF FISTULA BY HYDROGEN PEROXIDE.

Dr. H. Graff, a military surgeon of Christiania, publishes in the *Norsk Magazine* the result of his experience of peroxide of hydrogen in the treatment of abscesses which do not admit of being laid completely open so as to subject them to antiseptic treatment, and of fistulous sinuses offering the same difficulty. The author recommends, in preference to all other antiseptic fluids, irrigation with a fifteen-volume solution of peroxide of hydrogen, which he employed with the greatest success at the Royal Hospital of Christiania. The great development of gas which takes place in consequence of the decomposition of the peroxide when coming in contact with blood or pus removes the pus very effectually. The irrigation, followed by proper antiseptic dressing, causes a considerable decrease of the discharge, and healing takes place in a remarkably short time. In the case of cachetic patients, when granulation is slow, Dr. Graff recommends that the irrigation should be occasionally changed for injections of equal parts of balsam of Peru and ether. The treatment is especially valuable in cases of indurated wounds with puriform cavities. It is, of course, necessary to make due provision for rapid and free drainage, as the development of much gas may otherwise produce serious pressure.

NEW OBSERVATIONS CONCERNING THE THERAPEUTIC ACTION OF ICHTHYOL.

Stacquart (*Journal d' Accouchements*, January, 1892.) found that ichthyol proved very valuable in erysipelas; in a case of generalized pruritus, a 10 per cent. ointment and baths with ichthyol soap cured the affection in a few days. The same result was obtained in a case of pruritus scroti, and also in one of dermatitis accompanied with suppuration. Lichen urticans and also pruritus vulvæ, due to a severe leucorrhœa, yielded to the use of ichthyol soap.

THE ACTION OF CACTUS GRANDIFLORA.

A recent physiological and therapeutic study of this new medicament has been published by Edouard Boinet and Jules Boy-teissier (*Bulletin General de Therapeutique*, Oct., 1891.) They find that *cactina*, the alkaloid of the plant, is but little poisonous. It increases the energy of the cardiac systole, exhibiting all the characters of a heart tonic. In doses of two milligrammes, the drug did not diminish the number of cardiac beats in the case of the frog, nor did it produce any alterations in the movements or the sensibility of the batrachian. For therapeutic purposes the authors employed extracts and tinctures of the plant, especially Adrian's tincture, and the results obtained, in the treatment of cardiac disease, have been more or less satisfactory. In summing up their conclusions, Boinet and Boy-teissier found: (1) that ten minutes after the first injection, in the case of the frog, the cardiac energy was increased; (2) that this effect was transitory; (3) that it was only maintained under the influence of new doses; (4) that in large amounts the remedy diminished the cardiac pulsations, this being accompanied, at a later period, by irregular contractions of the heart; (5) that cactina increased markedly the force of the heart without producing, as does the extract, a diminution of the pulse-rate; (6) that the tincture, in doses of forty drops, has no therapeutic effect; (7) that in asystolic cardiac affections the tincture, in the same quantities, was similarly without any appreciable effect; (8) that in true cardiac disease, in which there was a latent want of proper compensation, daily doses of eighty to one hundred drops raised the energy of a failing heart; (9) that in secondary cardiac symptoms, in arhythmic conditions of nervous origin, daily doses of eighty, one hundred, and one hundred and twenty drops were well borne, and generally produced a regularity of the pulse; (10) that even with these large amounts, used for a considerable length of time, no untoward after-effects were observed in patients, or any evidence of a cumulative action.—*Univ. Med. Mag.*

THE TREATMENT OF URÆMIC COMA AND CONVULSIONS.

Dr. John Ferguson sums up a paper upon this subject in the *Therapeutic Gazette*, 1891, No. 9, p. 583, as follows:

In cases of albuminuria of moderate severity, give the saturated solution of magnesium sulphate; if more acute and urgent put the patient in bed, with the head elevated. If there be severe headache, any muscular twitchings, or tendency to coma, give calomel, croton oil, and nitrate of potassium, and maintain the action of the bowels by salts. Induce free perspiration by warm packs, hot drinks, and the salicylates. Allow no animal food but milk, and give liquids very freely. If convulsions, a hypodermatic injection of morphine, followed by pilocarpine. In pregnancy, push this treatment vigorously, thus making interference unnecessary. To secure full action of the skin, the use of salicylate of sodium or potassium is strongly advised.

CATRAMINE, A NEW TEREBINTHINATE.

Vincenzo Gauthier (*Gazz. degli Ospitali*, February 4th, 1892) gives the following information, derived from a laborious series of experiments, with regard to catramine. Chemically, it is an essential oil, which resinifies very easily, and resembles very closely the turpentines derived directly from the coniferæ. Physiologically its action in animals closely resembles that of oil of turpentine. It contains more resin than turpentine, and appears to be better borne. It is absorbed well either by the stomach or when given as vapor by the lungs; it is eliminated with the urine in the form of resin. From this fact it should be useful in diseases of the genito-urinary system. From a number of clinical trials the author considers that catramine is indicated (1) in chronic respiratory troubles, with abundant secretion; in the subacute stages it may be use-

fully combined with a narcotic; it diminishes the secretions, which under its use regain a healthy character. (2) In genito-urinary troubles where it may very advantageously replace essence of turpentine. —*Brit. Med Jour.*

MEDICINE.

A REMARKABLE CASE OF FEBRILE CHLOROSIS.

The following interesting case is reported by J. de Dios Peinado (*Gaceta Médica Catalana*, January 15, 1892.): A woman, 32 years of age, multipara, menstruated 40 days after her third confinement; from this moment the patient became pale, coughed somewhat and had evening fever, intermittent at first, remittent afterwards, and continued, finally reaching a height of 40.5°. C. A thorough examination of all the internal organs gave negative results; the patient, however, had a gastro-intestinal catarrh accompanied with anorexia, dyspepsia, nausea and vomiting, diarrhœa and pains; symptoms all were attributed to a tubercular infection. She was placed under an anti-tubercular treatment, but without any good results. The same symptoms continued, with, soon afterwards, some harshness of the respiration. The persistence of the condition and the absence of all physical signs in the lungs, led the author to diagnose the case as one of febrile chlorosis. The administration of the iron preparations being contra-indicated owing to the catarrhal state of the digestive tract, the patient was ordered to take 1 centigramme of calomel every 6 hours, a medication that, in many cases of acute anæmia (in which the parasitic nature of the disease is probable) may be considered as heroic. Two days after the beginning of this treatment the vomiting and the diarrhœa ceased, and in 5 days more the fever disappeared and did not return. The clinical history of this interesting case shows: 1. How easy it is to confound certain acute anæmias, of infectious or of nervous origin, and which disturb the hæmatopoietic processes, with pulmonary or general tuberculosis; 2. The great error of those who consider mercurials anæmia producing agents, and who, therefore, abstain from employing them even in syphilitic cases, on the supposition that such remedies are followed by great destruction of the corpuscular elements of the blood. Clinical and experimental evidence demonstrate the fact that mercurials, given with precaution, are powerful reconstituent remedies in a great number of anæmias, and even in those conditions of impoverished blood from organic causes, such as are found in tuberculosis and scrofula. This opinion has for a long time been entertained by Huffeland and sustained in our days by the observations of Hayem and Dochmann.

ACUTE MEDIASTINITIS.

M. Santa Maria y Bustamante (*Boletin de Medicina Naval*, January 15, 1892.) publishes the following case: A man, 37 years of age, had, 2 years previous to his present ailment, a pneumonia of the base of the right lung, from which he recovered completely, no trace being left behind. Recently he felt a sharp pain over the sternal region, corresponding to the 4th. costal cartilage of both sides. This painful sensation came on spontaneously, but could be provoked by a slight pressure; he suffered at the same time from oppression, accompanied with great distress; the respiration was accelerated, superficial and interrupted; he had a dry cough, and the action of the heart was tumultuous. Fever did not rise above 39°. C. From the negative results obtained after a thorough examination by auscultation and percussion over the heart and lungs, and the absence of swelling of the jugulars and the paradoxal pulse, the author, by exclusion, diagnosed an acute mediastinitis. Under a large blister placed over the anterior part of the chest, and a few injections of the hydrochlorate of morphine, the symptoms disappeared. The writer, then, details the possible terminations of acute mediastinitis, and especially the formation of mediastinal abscesses which, in their passage, may go through most of the organs within the thoracic cavity and even perforate the large blood-vessels. The diagnosis of this affection is often quite difficult, and then can only be established by exclusion; it has no especial symptomatology, and may frequently be mistaken for a dry pleurisy, so much the more so, when the condition may, itself, be a symptom of pleurisy.

INTERMITTENT CLAUDICATION AS A DIAGNOSTIC SIGN IN DOUBTFUL CASES OF DIABETES.

R. Viziolli (*Annali di Nevrologia*, f. 2, 81, 1891) believes that in diabetes, intermittent claudication is always a sign of the existence of a hyperplasic endoarteritis; that it precedes gangrene and, consequently, it is a sign of great prognostic value. In one case referred to by the author, the disease was accompanied by a fatal attack of angina pectoris, proving that the coronary arteries had taken a part in the endoarteritis. The sign under consideration will, therefore, prove of great diagnostic value in doubtful or ill-defined cases of diabetes.

HYDATID CYSTS OF THE LUNGS.

The following observation is published by A. Laveran (*La Medecine Moderne*, February 4, 1892): A young man, 26 years of age, military inclined, entered the hospital on the 7th. of January, 1892. The history of the case only revealed the fact that the patient had suffered from measles at the age of 3 years. During the latter part of the month of October, 1890, he felt, while fencing, a sharp pain in the chest, followed by abundant hæmoptysis. This was repeated; the patient had sometimes purulent expectoration, and continued to have symptoms of pain over the region of the chest, dyspnœa, cough and apyrexia. By December, 1891, the expectoration consisted of pus mixed with blood and whitish membranes, which, under the microscope revealed a hydatid nature. The disease comprised, in the course of development, three periods: a latent period; a second period characterized by hæmoptysis, dullness on percussion, an obscure respiratory murmur, together with other symptoms peculiar to tuberculosis. During the third period, the cyst either opened into the bronchial tubes, or either, after suppuration had taken place, the matters found their way into the pleura. This latter event would have produced the most serious symptoms, and perhaps rapid fatal results. The presence of the membranes spoken of, in the sputa, cleared the diagnosis. The pathogenesis of the echinococci is to-day well understood. The germs are produced by the ova of the tænia ecchinococcus of the dog. Thus is explained the frequency of this disorder in Iceland, where dogs are numerous and live promiscuously with the inhabitants. Hydatid cysts are likewise of frequent occurrence in Australia.

CLINICAL AND EXPERIMENTAL RESEARCHES ABOUT TETANUS OF GASTRIC ORIGIN.

L. Bouveret and E. Devic (*Revue Mèdicale*, January 10 and February 10, 1892.) have made an interesting study of the above subject. The tetanus which sometimes occurs in patients suffering from dilatation of the stomach, is a complication proper of gastric ectasis, this being accompanied by a permanent hypersecretion. This tetanus results from an intoxication of a gastric origin; but such intoxication ought not to be attributed to a pathogenic microbe which vegetates in the stomach. It results from stomachic chemical changes, changes which characterize the constant hypersecretion. The peptotoxine of Brieger does not exist wholly as a normal product of the peptonization of the albuminoids. It may arise in the course of *extracting* operations. Hydrochloric acid in the free state and alcohol, in the presence of peptone, are the two factors in the formation of peptotoxine. The *rôle* of the alcohol in these cases is not only that of a dissolvent; it is a true reagent, and takes a part in the formation of the toxic substance. When introduced intravenously, a solution of an alcoholic extract of the liquids of digestion, natural or artificial, produces violent tetanic convulsions; subcutaneously, however, it only causes paralytic phenomena. The symptoms produced by experimental poisoning, when the dose is small and the injection made slowly, bear great analogy to those of tetanus observed in man. In one instance, the convulsive symptoms appeared after the ingestion of a large dose of alcohol. It may, therefore, be asked whether the convulsant substance contained in the alcoholic extract may not arise or be produced in the abnormal conditions of digestion in a dilated and hypersecreting stomach. This hypothesis is confirmed by the results of the experiments of the authors. A highly convulsive alcoholic extract may be prepared by evaporating the liquids of digestion and the alcoholic solutions over a stove at a temperature of 39.°C., that is, at the temperature of the stomach. The authors have produced convulsive movements by intravenous injections of artifi-

cial digestions to which alcohol had been added, and in which the hydrochloric acid remained always in a free state. The age, so to speak, of the artificial digestions increases the convulsive power of these. A digestion one month old may produce true tetanic convulsions. The nature of this convulsant substance, the highly probable cause of this gastric tetanus, remains to be determined. The experiments of Bouveret and Devic prove that such a substance is not a chlorhydrate of ethylamine or of ethylene-diamine. It is probably the result of a syntonine to which alcohol gives properties: a poisonous odor, a toxicity and a convulsant power. It is important, therefore, to suspend completely the use of alcohol in all cases of constant hypersecretion, and especially in those complicated with gastric retention. When tetanus appears, the best treatment consists in evacuating and washing out the stomach by means of a sound.

CEREBRAL LOCALIZATIONS.

A. Brunati (*Archivio Italiano* XXVII, fasc. 3 and 4, 1891) reports a case which is of interest in a certain point of view. The subject was a young man twenty-one years of age, who had had, when three or four years old, a fall, injuring the parietal region of the left side, and for five years he had been considered insane though previously he had been of weak mind and neurotic disposition. He was of small size and unsymmetrical and deformed in the lower limbs. There was no paralysis nor sensory disturbance and there had been no convulsions. The patient died of ileo-typhus and the section showed adhesions of the scalp to the skull at the point of injury, also of the dura to the calvarium and to the cortex below, and an old lesion involving the two ascending convolutions of the left side with extensive destruction of the gray matter of the cortex, also involving the frontal and parietal convolutions. Another case is reported in the same number of the *Archivio Italiano* by Dr. G. Antonini which has a similar interest in some respects. The patient had suffered with convulsive attacks which had left him with paralysis of the right arm and facial and lingual hemiparesis of the right side with amnesic aphasia. The autopsy revealed diffuse general endo-arteritis obliterans, atrophy of the convolutions of the insula with softening of the same, which also involved the first and second temporal convolution and extended inward deeply in the centrum ovale to the lenticular nucleus and the external capsule. Posteriorly it reached the external occipital convolution. On the external surface of the brain the softening was apparent at the foot of the third frontal, the two ascending and the posterior portion of the inferior parietal convolutions. The membranes were adherent in various portions of the cortex. The most interest here attaches, it seems to us, to the absence of sensory aphasia depending on the lesions of the temporal convolutions, which absence is not to be explained by any exceptional functioning of the corresponding parts of the intact right hemisphere as the patient was not left-handed. There was apparently no evidence of verbal deafness.

FACIAL PARALYSIS.

Dr. Lusanna (*Rivista Veneta* for October, 1890), makes quite an extended study of the course and disease of the seventh pair of cranial nerves. He divides it anatomically into five portions:

1. Cerebral.
2. Bulbar.
3. Intracranial; the trunk of the nerve from its root to its entrance into the internal auditory meatus.
4. Inter-cranial; its traverse through the cranium.
5. Extra-cranial, from the stylo-mastoid foramen to its different terminal filaments.

These divisions are of much importance, not only from a dignostic point of view, but also in rendering a prognosis. Lesions occuring in the second portion are often fatal; those in the first, second and fourth are serious, while those in the fifth are light.

The differential symptoms indicating the seat of the disease in its course, are:

1st Portion.—Cerebral, conservation of reflex phenomena.

2d Portion.—Bulbar, paralysis of the extremities.

3d Portion.—Intra-cranial, injury to the neighboring nerves.

4th Portion.— Inter-cranial, gustation of the anterior part of the tongue abolished. Hyperæsthesia of audition.

5th Portion.— Extra-cranial, paralysis of the facial muscles not of the palate.

SURGERY.

NERVE GRAFTING.

Mr. Damer Harrisson, after recalling to the Clinical Society of London the excellent results that followed close apposition of the ends of divided nerves, observed that the only satisfactory method of dealing with nerves, the ends of which were too far apart to admit of their being sutured, was by nerve grafting. He referred in detail to the history of eight cases in which this operation had been performed at home and abroad, and then narrated a case under his own observation. A lad, aged 13, was admitted into the Liverpool Northern Hospital eleven weeks after a cut of the front of the right wrist had divided the median nerve and all the flexor tendons except the flexor carpi ulnaris. On admission the fingers were immovably fixed in the flexed position, paralysis of both motion and sensation being complete in the region supplied by the median nerve. Trophic changes were also present, the hand being blue and cold, the skin glossy, and the short muscles of the thumb much atrophied. The flexor tendons were found to be matted together; nearly 2 inches of the median nerve had been destroyed, leaving a gap between the ends. After dealing with the tendons, the nerve ends were freshened, thus increasing the separation to 2 inches, and a graft 2½ inches in length, taken from the sciatic nerve of a recently killed kitten, was fixed in position by one fine catgut suture at each end passing through the substance of the nerve. The limb was then put in a splint, with the hand flexed and the fingers straight. The wound healed by first intention. Sensibility began to return in the palm at the end of forty-eight hours, and eventually extended to the fingers and the thumb, except to the tips of the fingers. There was also transference of sensation impressions, those from the index finger being referred to the middle finger. At the end of three months the nutrition of the hand showed great improvement. Motion did not return until the end of five months, and appeared first in the short muscles of the thumb. Now the patient could oppose the thumb to the index finger. Another operation of the same kind had still more recently been performed by Mr. Mitchell Banks, of Liverpool, upon the ulnar nerve at the elbow after excision of a neuromatous tumor, 4 inches being grafted from the sciatic nerve of a dog. Sensation returned within thirty-six hours. Of the ten cases quoted by Mr. Harrisson, three were perfectly successful, six partially successful, and one failed. He attributed the difference in the success attending primary and secondary grafting to the trophic disturbances present when grafting was resorted to as a secondary operation. Restoration of function took place readily enough after long periods of time in respect of sensory nerves, but the degeneration which took place forthwith in the distal portion of motor nerves rendered repair slow and the return of function very gradual.

A NEW SUTURE.

Dr. Alexander Fulton, in *Medical News*, January 23, 1892 describes a new suture. Round pieces of amber, about one-sixth of an inch in diameter, of various lengths, are used, perforated as required. Lead, glass, or any material that can be kept thoroughly aseptic may be used. Fine wire (silver preferred,) after immersion in carbolized water, is run through the lip of the wound about half an inch from the edge when deep suture is desired, and one-third of an inch when more superficial suture is wanted. It is then put through the bar and clamped with a perforated shot. The lips of the wound are thus by traction brought in perfect apposition.—*Med. Age*, Feb. 10, 1892.

TREATMENT OF RETRO-PHARYNGEAL ABSCESS IN INFANTS.

Bilton Pollard writes in the *Lancet*, February, 1892: Retro-pharyngeal abscess is not always dependent on spinal disease. In the latter the abscess occurs under the muscular structures in close contact with the vertebræ, in the former pus is found in the cellular tissue between the pharynx and the prevertebral muscles.

The disease is not common, but merits attention from its possibly serious termination if not discovered. Evacuation of the abscess through the mouth has not proved satisfactory, on account of the difficulty of maintaining drainage.

The method recommended is to make an external incision along the posterior

border of the sterno-cleido-mastoid muscle near its superior attachment, and carried through the superficial structures until the floor of the posterior triangle is reached; the great vessels and nerves are then separated by blunt instruments and a finger is introduced into opening so deeply that it can be felt by a finger in the mouth of the patient, to be against the pharyngeal abscess.

A director is then thrust into the abscess through external opening and a drainage-tube is inserted. The result is almost immediate and is permanent. As the abscess cavity heals, a smaller and shorter tube may replace the one first introduced.

This is the operation advised by Prof. Chiéne, who claims more perfect antisepsis for it than is possible in oral incision.

TREATMENT OF COMPRESSED FRACTURE OF THE SKULL.

Dr. Brice Clarke gives details of two cases of compound fracture of the skull, in which the fragments were carefully replaced in situ and became firmly reunited. One of the patients was a plate-layer, who had an extensive fracture of the frontal bone caused by the buffer of an engine. The other was a girl whose parietal bone was fractured by a flower-pot falling from a considerable height upon her skull. In both cases the wounds and the bone fragments were carefully cleansed, and the fragments firmly wedged back into place. In both, union was absolutely firm six months later and remained so up to the present time, more than a year after the accident, nor was it now possible to detect any signs of fracture in either case. Great stress was laid upon the necessity of wedging the bones firmly back in their exact relative positions so as to insure accurate apposition of the fragments. Mr. A. Lane said that after trephining, if the bone were replaced it would unite. W. H. Bennet mentioned a case in which he had replaced a two inch trephine circle of bone with perfect success, and this instance was by no means unique. Dr. Clark in reply said, that, so far as he had been enabled to ascertain, it was not unusual for replaced circles of trephined bone to unite. He said it did not seem to be generally known that if pieces of bone were all put back in their proper places they were very likely to unite.—*The Lancet*, Oct. 17, 1891.

ANTISEPTIC SYMPHEOTOMY.

Spinelli (*Ann. de Gynéc. et d'Obstét.*) maintains the results of Sigault's operation, performed with antiseptic precautions, have been constantly favorable for the mothers, and that the children run no risk through the essential features of the procedure itself, the dangers which they incur being solely due to the manœuvres needed for extraction. He describes 24 cases where the symphysis pubis was divided during labor: 12 were performed in the clinical department of the Hospital for Incurables, and 7 in private. All pelvic measurements are given. All the 24 mothers and 23 of the children were saved. The 1 child which was lost was delivered by turning, and was born aspyhxiated. It was revived, but died in twelve hours. He concludes that a well-developed fœtus, at term can, after division of the symphysis, be delivered through a contracted pelvis of which the true conjugate is but two and one-half inches, a measurement for which, at present, embryotomy or Cæsarian section is almost universally practiced. Provided that strict antisepsis is enforced, the mother suffers no permanent damage. The divided ossa pubis unite by first intention.—*The British Medical Journal*, February 13, 1892, suppl., p. 27.

OBSTETRICS.

DECIDUO-SARCOMA OF PLACENTA.

E. Blanc (*Bull. et Mèd. de la Soc. Obstèt. et Gynèc. de Paris*, December, 1891) reports a case in which a woman aborted at the fifth month. The placenta did not follow the ovum, and the midwife tore off the cord in attempting its extraction. A physician was called in, and he found the cervix closed. Alarming symptoms set in, and on the third day after abortion the patient was sent into a lying-in hospital at Lyons. Rigors had occurred, and the temperature rose to over 102°. There was no flooding, and the patient's general condition was good. The fundus rose to about three fingers' breadth above the pubes. The cervix was long, rather soft, and hardly permeable to the finger. The vagina was carefully disinfected, the patient placed under chloroform, and the uterine cavity explored. The placenta was very adherent, it lay in the right half of the uterus, and was only ex-

tracted in part. No hæmorrhage followed, and the uterus was washed out with an antiseptic. On the next day the temperature remained high. With great difficulty the rest of the placenta was removed. The surface of the uterine walls to which it was attached felt rough and dense, as though aponeurotic. The patient rapidly recovered. On careful examination the placenta was found to be subject to deciduo-sarcoma, as described by Chiari and Sänger. This diagnosis greatly modified the prognosis of the case, which did well after the entire removal of the membranes; in several other instances a trace of tissue left behind has formed a tumor. The patient, who had once been delivered normally, had not suffered from any affection which might explain the morbid condition of the placenta.—*Brit. Med. Jour.*

THE RESULTS OF TWO HUNDRED LABORS WITHOUT INTERNAL DISINFECTION.

Mermann has continued in the clinic at Mannheim his usage in conducting labors without internal disinfection, and records in the *Centralblatt für Gynäkologie*, 1892, No. 11, the results of 200 recent cases. He had but one death, and that from rupture of the uterus complicated by placenta prævia and a large amount of amniotic liquid. In the two hundred cases there were 36 which presented complications of greater or less gravity. These cases complete a series of 700, presenting no death from septic infection. The morbidity rate was 6 per cent. In the last 200 cases there occurred but 2 cases of mild ophthalmia, and in all less than 10 cases of conjunctivitis were observed among infants. Mermann's practice is to omit injections, and, whenever possible, to also omit internal examinations, relying upon palpation and auscultation and a close observation of the case.—*Amer. Jour. Med. Sc.*

RAPID INDUCTION OF ABORTION BY THE CURETTE.

Doléris (*Annales de Gynèc.*, March, 1892) read a paper on this proceeding at a recent meeting of the Obstetrical Society of Paris. A young married woman, subject to advanced aortic disease from childhood, became pregnant, and as was expected, the gravest symptoms developed from the first: dyspnœa, rapid hypertrophy and displacement of the heart, insomnia, and alarming syncope during vomiting. At the end of two months the patient was very cachectic. Immediate induction of labor seemed necessary as there was, over and above the symptoms just noted, great anæmia. The os was dilated with laminaria tents, and the gravid uterus scraped with the curette. In less than thirty-six hours abortion occured, and the patient recovered and did well. In the discussion on Doléris's case, it was observed that statistics proved how severe heart disease did not necessarily affect the prognosis of pregnancy so very gravely. M. Guéniot mentioned three cases in which women with organic disease of the heart bore their children to term in repeated pregnancies without any marked aggravation of the cardiac affection. Dr. Porak believed that the great point of importance in these cases was the state of the endocardium.—*Brit. Med. Jour.*

RUPTURE OF THE UTERUS.

Dr. Schultz, of Budapest, presents (*Orvosi Hetilap*) the following statistical information: (1) Complete ruptures without treatment, 60 cases giving 20.2 per cent. recoveries; (2) complete ruptures treated with drainage or tampons, 70 cases with 36 per cent. of recoveries; (3) complete ruptures treated by laparotomy, 193 cases with 44.7 per cent. of recoveries.

After enumerating the advantages of laparotomy in this class of cases, Schultz recommends that in every case where it is possible to make a positive diagnosis of complete rupture of the uterus the abdomen should be opened. If the tear is much contused and not suitable for suture, or if myomata are present, or the endometrium is already infected, hysterectomy is to be performed; otherwise, the abdominal cavity is to be emptied and the tear sewed up. Subperitoneal pockets remaining in the parametrium or vaginal vault should be drained.

Incomplete ruptures should be tamponed with iodoform gauze or wicking, or drained by means of a glass tube. A flannel bandage is firmly applied to the abdomen; the treatment is in other respects like that after a laparotomy. If the conditions for laparotomy are unfavorable in cases of complete tear, the child should be extracted *per*

vaginam and a tampon inserted.—*Internationale Klinische Rundschau*, January 10, 1892.

RETROFLEXION AND RETROVERSION IN PREGNANCY.

Chrobak (*Centralbl. f. Gynäk.*, No. 7, 1892) maintains that these conditions, so far from being unusually associated and therefore amenable to the same treatment, are clinically and pathologically distinct. He endeavors to show that the relations of the uterus, and the mechanism of its muscular apparatus and ligaments, favor spontaneous reduction of a retroflexion in pregnancy. He even believes that he has never known a case of uncomplicated retroflexion where manual reduction was absolutely needed. He has reduced a great many retroflexed gravid uteri, either to relieve pain or difficulty in defæcation or simply because a displacement being discovered he naturally rectified it. Far more frequently he has done nothing, and spontaneous reduction has followed. The case of retroversion is quite otherwise. If a retroversion be not replaced by the hand, abortion, under very unfavorable circumstances, or incarceration, will inevitably ensue. The fundus grows larger and the cervix becomes more and more elevated, and recedes from the symphysis as the pregnancy advances. Spontaneous reduction is an impossibility under the circumstances, and it is the duty of the obstetrician to interfere.—*Brit. Med. Jour.*

HYMEN OBSTRUCTING LABOR.

I recently attended Mrs. F., a healthy primipara, aged about 22. The head was distending the perineum, but on examination I found I could not, as usual, sweep the examining finger around the head, and there was evidently something obstructing it. Puzzled to know the meaning of this I exposed the patient, and found the hymen tightly stretched over the head, like the skin of a drum. I at once proceeded to divide it, but while I was doing so the child was shot suddenly into the world, unfortunately rupturing the perineum. Playfair states that such cases are rare. For this reason, and to warn others against the accident which befell me, the case seems worth recording.—J. Cuthbertson Walker, in *Brit. Med. Jour.*

GYNECOLOGY.

A MODIFIED HYSTERORRAPHY.

In a review of Vaton's work, "*Etude comparative des differents traitements du prolapsus uteri*" by Luke, of Königsberg, the following description of the former's modification of Caneva's method of fixing the displaced uterus to the anterior abdominal wall is given: The abdominal wall is incised in the median line until the peritoneum is reached. The latter is now loosened from the posterior wall of the previously distended bladder with the right index finger, the left hand keeping back the coils of intestine. According to Vaton, whose trials of the method were made upon the cadaver, this can be accomplished without difficulty. The peritoneum is now easily loosened from the anterior surface of the uterus; the bladder is now emptied. The uterus is now fixed either by sutures or Muzuex's forceps, drawn toward the abdominal wall, and both sides of its anterior wall are secured, as a preliminary step, to the anterior surface of the peritoneum. A thread is then led through the abdominal muscles of the left side, which grasping the anterior surface of the uterus, passes out through the right side of the abdominal wall. A similar fixation suture is established about 1 cm. below the first. The sutures are now firmly tied and the abdominal wound closed.—*Centralbl. f. Chirg.*, 1890, No. 42.

PUERPERAL HÆMATOMA UNDER DOUGLAS'S POUCH.

Ter-Grigoriantz (*Centralblatt f. Gynäk.*, September 12th, 1891) records a case in which a woman, aged 24, who married at the age of 18, had two normal pregnancies, and had been delivered at term a third time. She was four days in labor, and the child, very bulky, died at birth. After delivery the patient remained unconscious for three days, and then suffered for a week from diarrhœa. Two months later a bloody discharge of a faint odor came away from the vagina. The tip of the forefinger could be passed into a round sharp-bordered opening in the upper part of the vagina. To the left of the aperture and at the same level was a normal cervix; the uterus, not enlarged, was anteverted, and the fundus was directed towards the

horizontal ramus of the left pubes. A firm mass filled the right side of the pelvic cavity; it extended downwards, but hardly passed to the left of the middle line at any point. The surface of the mass was smooth and felt as though continuous with the pelvic walls. Ter-Grigoriantz washed out the opening in the vagina with a 4 per cent. solution of carbolic acid. Quantities of very fœtid broken-down clot came away. After daily syringing for six days hardly any more clot escaped, but stinking pus was discharged. At the end of a fortnight the injected carbolic solution came away almost clear and quite odorless. The mass, during this treatment, gradually disappeared. Douglas's fold sank low in the pelvis, the uterus assumed its normal position, and the opening lay in the posterior vaginal wall immediately below the cervix. Hæmorrhage had clearly occurred under Douglas's pouch after labor, and the pressure of the clot had caused the vagina to slough.—*Brit. Med. Jour.*

HYSTERECTOMY FOR CARCINOMA OF THE UTERUS.

Braithwaite (*British Medical Journal*, No. 1624, p. 329) reports the results in twelve cases of carcinoma of the uterus treated by complete vaginal hysterectomy and in four treated by supra-vaginal hysterectomy. Of the first group, three were living and free from recurrence of the disease at the time of report, four years, eighteen months, and ten months, respectively, after operation; one was living, free from disease, four and a half years after operation, but had been lost to observation for a year and a half; one died two years after operation, without recurrence of the disease; in two cases the uterus was profoundly involved, and death followed the operation in six months and a few months, respectively; in four cases there was fatal recurrence; four months, three months, ten weeks, and soon, respectively, after operation; one case died from acute suppurative peritonitis following the operation. Of the four cases in which supra-vaginal hysterectomy was performed, one was free from recurrence nearly five years after the operation; in two the disease recurring in seven months and two months respectively; one case died twelve hours after the operation from shock and hæmorrhage.—*News.*

A COLOSSAL FIBRO-CYSTOMA OF THE OVARY.

Dr. Peters makes the following record: The patient, a woman æt. 40, whose last delivery was 20 year before, and who in the course of 5 years had aborted twice, noticed for 13 years a slow increase in the circumference of her abdomen. Disturbances of defecation and urination had appeared 2 years since. The patient's appetite was variable, she having at times morbid cravings.

During the last year she suffered from pains in the back, swelling of the legs, sleeplessness and loss of appetite: The greatest circumference of her belly, somewhat below the navel, was 145.5 cm.; between the xiphoid cartilage and the pubes the distance was 81 cm. The operation necessitated an incision 60 cm. long. The removed tumor consisted of the left ovary. It was a fibro-cystoma, 38-50 cm. in diameter (in different places) and weighed 37 kilogrammes (about 81 pounds.) Recovery took place without any disturbance. The patient is obliged to support the superfluous abdominal skin by a binder.—*Oeekb. van het Node. Tsjdsch. voor Geneesk.* 1890, I No. 2.

SUPERNUMERARY OVARY AND TUBE.

E. Falck(*Centralbl. f. Gynäk.*, No. 44, 1891) publishes a case of very unusual anomaly. A multipara, aged 37, suffered for about ten weeks from pains in the sacral region, right side, and right leg. The period came on fourteen days before it was due, and lasted rather longer than usual. Behind the uterus a freely movable tumor, about the size of an apple, was found. Abdominal section was performed; the tumor was easily removed. On its upper aspect lay a long cord-like structure, half the thickness of a man's finger. The tumor had no connection with the genitals, but was attached to the omentum, from which it was separated. Both ovaries—still small but subject to cystic degeneration—were removed. Falck declares that the right and left appendages were then seen to be normal in every other respect. The tumor, which was filled with a substance like soft pitch, was found to consist of the middle of a dilated tube. A piece of distinct tissue flattened on its surface proved to be the remains of an ovary and tube near corresponding appendages

normally attached to the uterus. Falck gives a short account of cases of supernumerary Fallopian tubes, already published, and of accessory ovaries. The last-named anomaly is of a different character from that under consideration, which implies some disturbance in development at a very early stage of embryonic life.—*Brit. Med. Jour.*

PEDIATRICS.

AN INTERESTING CASE OF TOO EARLY DEVELOPMENT OF THE SEXUAL ORGANS IN A CHILD.

At a late meeting of the Paris Academy of Medicine, M. Crivelli (*Wiener Klin. Wochenschrift*, July 24, 1890,) showed the photograph of an eighteen-months'-old girl whose genital organs presented a degree of development such as is usually found at the age of eighteen. The mammæ and the nipples were also well developed; the mons veneris covered with lanugo, the clitoris being also very large. By investigation, Crivelli found out that the child was addicted to masturbation. The menses had appeared regularly since three months, and lasted from three to four days. Before the appearance of the menses the child feels sick for about twenty-four hours.

CONGENITAL RICKETS.

Mr. Gilbert Barling, surgeon to the General Hospital, Birmingham, records a case illustrating true rickets arising in the fœtus without the association of the cretinoid condition. The patient, aged six months, was the second child of a young healthy mother, who had influenza during the second month of her pregnancy. Directly after birth, and ever since, the child had been subject to profound sweating, especially during sleep, as also to bronchial and intestinal catarrh. The hair is dark and abundant, the anterior fontanelle is very large, and the frontal eminences are very marked; otherwise the head is well shaped. A week after birth the right humerus broke spontaneously; three weeks later the left leg bones also broke; and a fortnight later the left humerus; but all these bones have united again. Ever since birth the thigh and big bones of both extremities have been noticed to be unusually curved forwards and outwards, and there is shortening of the left femur, with thickening at the upper part, which indicates that it has been fractured; probably this happened before birth. There is no nodulation at the junction of the ribs with their cartilages, nor is there enlargement of the epiphyses. There is no mental dullness, such as cretins show; on the contrary, the child is unusually bright and intelligent, laughing and noticing objects around it. There were no signs of the cretinoid state.—*The Birmingham Med. Review*, p. 107, February, 1892.

ON RELAPSE, OR RECRUDESCENCE IN SCARLET FEVER; TWO CASES, WITH A NOTE ON THE LITERATURE OF THE SUBJECT.

Boddie (*Edinburgh Medical Journal*, October, 1891) says: A true relapse in scarlet fever as opposed to recurrence is comparatively rare. The two cases reported are unquestionably examples of relapse. The first patient was a boy of fourteen years. He passed through an ordinary attack of scarlet fever, followed by desquamation and albuminuria, and had apparently recovered when on the thirty-seventh day, after exposure to cold and wet, his temperature rose and he developed all the symptoms of scarlet fever. The illness continued six days and was followed by more marked desquamation than after the first attack.

The second patient was a boy of nine years, who passed through a typical attack of scarlet fever, followed by desquamation and albuminuria. On the twenty-seventh day the symptoms suddenly returned and continued five days and were followed by partial desquamation.

The review upon the literature of the subject is quite complete.

IODOFORM AS A PROPHYLACTIC OF OPHTHALMIA NEONATORUM.

Dr. Valude (*Annales d'Oculistique—Merck's Bulletin*, December, 1891.) has published the results he obtained in the clinics of Dr. Bar and Professor Tarnier, in Paris, from the systematic employment of finely powdered iodoform as an application to the eyes of newborn babes. These results compare favorably with those obtained under similar conditions in the same wards by Dr. Crédé from silver nitrate.

The author recommends the eyelids to be carefully cleansed, and powdered iodoform dusted into the conjunctival sac as soon as the child is born—before the cord has been severed. As an advantage of this treatment it is claimed that the powder, or some of it, at least, *remains* in the folds of the conjunctiva *for a considerable time* after the application; whereas solutions of any kind immediately drain away.

Dr. Valude believes that iodoform will prove more useful than silver nitrate in the hands of *midwives*, because it can be more easily applied, and does not decompose—as the solutions of the silver-salt do, even when such precautions as preserving in dark bottles, etc., are taken.

CRANIOTOMY IN MICROCEPHALI AND IN UNDEVELOPED CHILDREN.

Lannelongue (*Gaz. des Hôpitaux*, 1891, No. 39), has performed craniotomy twenty-five times in microcephalic individuals and the imperfectly developed. He found in microcephalic skulls evidences of premature ossification of the sutures and diminished area of the fontanelles. Other observers have mentioned, as other operable causes of idiocy, injuries occurring during birth, notably compression of the skull, meningeal hæmorrhage of the convexity, leading to hæmatoma, circumscribed pachymeningitis and formation of cysts; and finally hyperostoses of syphilitic origin and general thickening of the bony vault of the skull. In the operation he has employed two different methods, the one consisting of linear and the other of flat incision. He now prefers the latter. Large portions of bone, either the shape of a V, of a rectangle, or of a T, are removed, the periosteum and skin flaps being then re-united, the area of bone measuring from eight to twelve millimetres. The operation lasted from forty to forty-five minutes. He does not think it necessary to remove the periosteum, basing this upon an observation of two children operated upon who died two months afterwards of croup. In these cases not a trace of bony regeneration was found. The ages of the children operated upon varied from eight months to twelve years. The operation was successful in twenty-four out of twenty-five cases; one ended fatally from sepsis. In three other cases slight suppuration occurred. In the majority of cases both intelligence and gait were improved.

HYGIENE.

"ELIMINATION OF MICRO-ORGANISMS BY THE SWEAT."

Under the above title a short paper appears in *L'Union Médicale* for March 3rd of this year. It commences by stating that it is still an unsettled question as to whether micro-organisms are able to pass through certain vessels and organs, and then be eliminated by means of the kidneys or intestinal canal, when these organs are in themselves perfectly unaffected and in a healthy condition. According to some authorities, among whom is Wyssokowitch, such an event can only occur when there is a sanguineous exudation, or the tissues of the kidneys or intestine are diseased. Some observers, on the other hand, deny that such conditions are necessary. Thus Trambusti and Maffucci maintain that they have found anthrax bacilli in the urine and bile when no disease whatever could be found in the kidneys and liver. Baumgarten, again, states that he has seen tubercle bacilli pass from the blood into the tissues when the walls of the vessels were quite healthy. From other authorities we learn, on well-established evidence. that pathogenic micro-organisms can pass into the milk when the mammary glands are unaffected. Brunner* investigated this matter from another side, and demonstrated the fact that pathogenic microbes could be eliminated by means of the sweat. This investigation was met with a great difficulty from the outset—namely, that it is not easy to sterilize the skin so as to be sure that the micro-organisms which were found in the secretion, and cultivated in artificial media, were derived from the tissues and fluids of the body; and not from its cutaneous surface. This difficulty was overcome by using animals for experiments which had been inoculated with disease, the pathogenic organism of which could not accidentally have found its way on to the skin. The animal was then made to perspire profusely by artificial means, pilocarpine being usually employed for this purpose, and then further inoculation and

*Berlin. Klin. Wochenschrift, May 25th, 1891.

cultivation experiments were made with the sweat. Proceeding in this way, Brunner injected a culture of staphyloccus aureus into a hog, one of anthrax into a cat, and one of micrococcus prodigiosus into a sucking-pig. In all three cases the microbes injected were found in the sweat, and also in the saliva. This is an important discovery, from both practical and theoretical points of view. It gives to crises, accompanied by profuse perspirations, which may be produced artifically or occur naturally, a still more important place than they formerly held. It also demonstrates that there may be great danger in allowing a patient who has been sweating profusely to possibly reabsorb the secretion, and that therefore it is a good plan to employ moderate friction with dry cloths when such a crisis occurs, and to subject all linen and clothing capable of absorbing the sweat to immediate disinfection. Another precaution which the investigation indicates is that when an abscess is discharging externally, or when a patient is suffering from erysipelas or other infectious cutaneous affection, there is great danger to the patient himself if the linen etc. are not changed after profuse sweats, as the micro-organisms may possibly be absorbed by the skin. It is singular, however, that several observers (including Mattei, Surmont, and Lile) have failed, after numerous attempts, to find tubercle bacilli in the sweat of phthisical patients; so numerous have such trials been that we may almost consider it as absolutely proved that such migration of the bacilli does not occur.—*Lancet.*

ALCOHOLISM AND TUBERCULOSIS.

Dr. Hector W. G. Mackenzie, assistant physician to the Brompton Hospital for Consumptives, is of opinion that tuberculosis is much more common among those addicted to alcohol than is generally believed. He says that his experience among the out-patients at the Brompton Hospital is that a considerable portion of the phthisical—especially of the men—have been alchoholic, and that a history of alcoholism is a very common antecedent in those cases where there is no inherited susceptibility to tubercle. As regards women, it is impossible to say to what extent alcohol is responsible for the disease, it being very uncommon for a woman to own to alcoholic habits. He finds that in alcoholic cases the condition of the patient is generally worse than would be expected from the amount of disease revealed by physical examination. It is therefore specially important in such cases, when there are any chest symptoms, to examine the sputum for bacilli. By this means he has been able to make an early diagnosis of phthisis when the examination of the chest was negative. In alcoholic cases the progress of the disease, as a rule, is rapid, and the prognosis particularly unfavorable. Dr. Mackenzie does not offer an explanation why many drunkards develop phthisis. Our observation leads us to the conclusion that in the majority of cases of phthisis in inebriates the patients have endeavored to live on alcoholics in lieu of food. Everyone admits the importance of malnutrition as a factor in the causation of tuberculosis, and it is not a matter for surprise that drunkards who habitually neglect their food frequently die of phthisis. —*Hospital Gazette.*

FISH DIET AND LEPROSY.

Dr. August Crane, lately Government Physician in Hawaii, writes as follows to a contemporary on the subject of fish diet and leprosy:—"From time immemorial the staple food of the native Hawaiians had been fish, and principally raw fish. Until about 1860, there is no history nor tradition of the existence of leprosy among them. At about this date it appeared, and at the time of its appearance, white people had been among them for forty years, and their food and methods of living had greatly changed. Canned foods, fresh meat, and vegetables had been so widely introduced that the use of fish, and especially raw fish, had enormously decreased, and could not be considered as a prominent feature of their diet. At the present day, while consuming no remarkable amount of sea food, one Kanaka out of thirty is a leper. All fish, no leprosy; little fish, much leprosy. This has been the history in Hawaii." These statements above expressed appear to be a formidable indictment against the theory that fish diet and leprosy stand in the relation of cause and effect. But the advocates in favor of the theory are now few and far between, despite the powerful authority of Mr. Jonathan Hutchinson.—*Med. Press.*

OBESITY.

A French journal recommends a mode of dieting for curing obesity, which is attributed to an army doctor. A colonel, who was threatened to be retired from the army, as he was so heavy that it required two men to lift him into the saddle, became thin in a few weeks, and to such extent that he had to take means to recover what he had lost. The means consisted simply in not eating more than *one* dish at any meal. It is said by doing this the stomach never takes too much. Nevertheless nothing but the one dish should be taken; no condiments or soups or supplementary dessert should be allowed.

MEDICAL CHEMISTRY.

THE REACTION OF URINE WITH ETHER.

Dr. Andrew H. Smith, writes in the *Lancet:* If a specimen of urine, taken promiscuously, be thoroughly agitated in a test-tube with half its bulk of pure sulphuric ether, there will result in most instances an abundant white foam. If now the tube be corked and set aside, this foam rises to the surface and gradually condenses into a greyish gelatinous plug, so firm, it may be, that the tube can be turned upside down without disturbing its contents. In another smaller proportion of cases no foam will result from the agitation, and the ether will immediately separate from the urine and form a clear layer above it. In some instances a second prolonged agitation after the lapse of a few moments will produce the reaction described. In other cases it may be obtained by adding a few drops of acetic acid and shaking the tube again very thoroughly. It will always be noticed that when the reaction occurs the fluid begins to clear first at the bottom, and the clearing progresses upward. When the reaction does not take place the order is reversed, a clear layer of ether appearing first at the top. Pending a thorough chemical investigation as to the nature of the substance thus separated from the urine, I find that the reaction occurs in urine which does not respond to any of the tests for albumen or for peptones. It occurs also in urine from which the phosphates have been removed, and it cannot be obtained with simple solutions of urea or of the urates. It is most abundant in the urine of those who have a good appetite and good digestion, and is usually absent after long fasting, or when the diet is greatly restricted. From these facts it seems probable that it represents an excess of nutritive material taken into the blood and thrown off by the kidneys, and not a product of disassimilation. Albuminous urine responds to the test in the same way and under the same conditions as normal urine, but if the patient is on restricted diet and the urine does not react to the test, it can be made to do so by adding nitric acid and filtering out the resulting precipitate. A portion of the albumen is redissolved by the acid, and at the time so modified that it is acted upon by the ether. This is shown by the fact that if the albumen be removed by heat and filtration before the acid is added, the reaction cannot be produced; but if a drop or two of acid be placed upon the filter, the filtrate immediately responds to the test. The same effect may be produced by acid spontaneously generated in the urine, so that a specimen of albuminous urine which will not show the reaction while fresh may do so after the acid fermentation has progressed for twenty-four or forty-eight hours.

It is possible that the presence of this material in the urine, and its peculiar reaction with ether, may explain some cases of anuria after prolonged etherization. The ether being eliminated by the kidneys and mixing intimately with the urine in the tubules, affords all the necessary conditions for plugging the latter with gelatinous material, too firm to be displaced, suspension of function necessarily following. Until we know more of the possible reactions of this substance, it will be well to receive with caution the results of some of the more "delicate" tests supposed to detect the presence of minute proportions of albumen.

SYNTHETIC TARTARIC ACID.

M. Genoresse has discovered a simple way of preparing tartaric acid synthetically. He starts with glyoxalic acid (CHO. CO_2H),(the acid peculiar to gooseberries, grapes, and similar fruits, and acting upon it with nascent hydrogen liberated by the action of acetic acid upon

zinc dust in contact with glyoxalic acid, the result is that 2 molecules of the latter acid are joined together by 2 hydrogen atoms, and that union gives tartaric acid, or rather the optically inactive form of it known as racemic acid, there being apparently equal molecules of the dextro and lævo varieties produced. The product was separated and examined. This new synthesis of tartaric acid would appear to throw some light upon the natural formation of tartaric acid; for, remembering the close relationship between glyoxalic and oxalic acids, which latter is one of the most readily formed in vegetable tissues, and the reducing agencies which appear to be connected with chlorophyll, we have all the means at hand to account for the natural synthesis of tartaric acid.—*Paris Correspondent of Chem. and Drugg.*

NEWS AND MISCELLANY.

VACCINATION IN AUSTRIA.

The Superior Sanitary Council of Austria has under consideration the details of a new vaccination law. This measure not only provides that every child shall be vaccinated in the first year of life, but that re-vaccination shall be compulsory before the school age is reached. Only animal lymph which has been prepared in institutions under State control is to be used. —*Brit. Med. Jour.*

A NEW CHAIR OF ORTHOPEDICS AT THE PHILADELPHIA POLYCLINIC.

At the last meeting of the Board of Trustees of the Philadelphia Polyclinic and College for Graduates in Medicine, an additional Chair of Orthopedics was created, and Dr. Benjamin Lee was elected Professor of Orthopedics. Dr. Lee is President of the American Orthopedic Association, Secretary of the State Board of Health of Pennsylvania, and has been a voluminous contributor to the Medical Journals, upon orthopedic subjects. Among the many subjects he has enriched by his labors, are the use of "Suspension in Pott's Disease" and the "Gymnastic Treatment of Deformities." The addition of Dr. Lee will greatly increase the facilities, at the Polyclinic Hospital, for the modern and scientific treatment of deformities for which it has already acquired a distinct reputation, and which the Trustees now desire to increase by the addition of this new member of the Faculty.

DAMAGES FOR LOST GRAFTS.

A novel action for damages is reported to be pending somewhere in the German Empire under some what curious circumstances. A nurse allowed skin grafts to be snipped from her lily white arm in deference to the wishes of the patient and the request of the surgeon. Unfortunately, the wound did not heal, as might have been anticipated, but proved the starting point of a cellulitus, causing great suffering, permanent disfigurement, and some loss of function. The nurse consequently feels aggrieved, and claims damages from the surgeon.—*Medical Press.*

MANAGEMENT OF HOSPITALS AT NORTH BROTHER ISLAND.

At the meeting of the Board of Health held April 12th, the following resolution was adopted: "*Resolved*—That upon due consideration of the testimony taken at an investigation in respect to the management of Dr. F. R. Percival, of the Riverside Hospital, at North Brother Island, in connection with typhus fever cases, this Board concludes that the persons sick with typhus fever have been properly treated and cared for, and that no further action is necessary in the premises at present." Soon after the investigation referred to was commenced, Dr. Percival was removed from the charge of the typhus fever cases and transferred to the charge of patients ill with other contagious diseases at North Brother Island, and he is still on duty in the latter position.

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THE
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Clinical Lectures.

FRACTURE OF THE SKULL; MOTOR LESIONS—CELLULITIS—STRICTURE OF THE RECTUM; COLOTOMY—FRACTURE OF THE GREAT AND SECOND TOES—HÆMORRHOIDS—MALIGNANT TUMOR OF THE LIVER.

By JOHN B. HAMILTON, M.D., LL.D.,

PROFESSOR OF THE PRINCIPLES OF SURGERY AND CLINICAL SURGERY, RUSH MEDICAL COLLEGE, CHICAGO, ILL.

FRACTURE OF THE SKULL; MOTOR LESIONS.

Gentlemen:—We have here one of the most interesting cases that could be brought before a class. This little fellow, 3 years old, about 18 months ago sustained a fracture of the skull. As I press my finger over the elevated portion of the parietal eminence near the suture on the left side, I can find still a place where the bone failed to unite after the injury. The patient is so frightened at this time that his gait cannot well be seen by walking, but there is a distinct unsteadiness in his gait, showing the weakness of the muscles of the upper portion of the right thigh, and on account of deficient innervation the extensor muscles of the fingers of the right hand fail to act. So then we have a distinct lesion of the motor area on the left side of the brain. My impression is from previous examination of the child when less frightened than at present, that there is an incurvation or projection of the edge of the fractured bone which produces this difficulty. The child is able measurably to contract the finger, but cannot extend it, and the defect in gait is due to irritation of the motor area of the left side of the cerebral hemisphere. The parent of the child states that for a considerable time after the fracture was received he was unable to walk and that his gait has become more steady as time has progressed. The paralysis of the arm was complete in the beginning; it is now, as you see, steadily improving. The question is, has that improvement reached its limit? We shall keep the child under observation for a period long enough to ascertain whether or not, there is a probability that the extensors will resume their function. If we find under continued observation that the condition is stationary, then operative measures will be instituted. The operation would consist in cutting down over the portion of the bone which was fractured. Examination of the wound and the edges of the bone, as near as I can ascertain, shows that the bones have never completely united after the fracture. There is still a fissure two inches long which has the effect in this case of an extra fontanelle.

In the treatment of this case antiseptic methods are only to be considered. In operations on the dura mater and on the brain itself the main thing to be considered is thorough antisepsis and we may be reasonably sure that improvement, without danger, will follow.

CELLULITIS.

We have here a case of cellulitis of the platysma myoid muscle and its sheath, also of the sterno-cleido-mastoid muscle of the left side. The causes are such as produce inflammation of the intermuscular substance elsewhere, usually referred by the patient to the sudden onset of cold. As we know now it is undoubtedly of infective origin. The boy says he is just recovering from an attack of typhoid fever. Of course, you understand that the typhoid bacillus could in no wise cause this particular inflammation, so it must have been

doubtless some specific pyogenic coccus gaining entrance through the blood-vessels. It is proper to say in this case that the treatment will consist in the application of hot fomentations, which will perhaps disperse the inflammation without operation. The position of the head, held in the position which you see, is simply due to the voluntary contraction of the muscle. The patient places the head in a position which is most easy for him, and consequently the muscles involved are relaxed when placed in that position. If permanently retained contracture results, constituting torticollis.

STRICTURE OF THE RECTUM; COLOTOMY.

We have here a case of a young man, about 35 years of age, who has a very serious affection, it being no less than a stricture of the upper portion of the rectum at about the sigmoid flexure. On attempting to pass a bougie through this stricture it was found very firm and unyielding and high up. It could not be reached with the finger. For some months he has been passing blood at intervals. He has been unable to have a movement from his bowels without a great deal of pain, and usually not without the introduction of the finger and irritation of the mucous lining of the bowel. His condition has become such that he desires some radical relief. We have then to do with a case of obstruction of the bowel due to a stricture—to a new growth probably malignant. It is quite certain that there is no history of syphilis in this case, usually considered in these growths as the most common cause, and the only thing left to consider is the question of carcinomatous stricture. The lumen of the stricture has steadily diminished, and the difficulty of passing fæces has increased from the beginning. The amount of blood which has been thrown out either with the passages or violent tenesmus which takes place has also increased. So that when you consider the rapidity of the swelling and the fact that rapid general emaciation has gone on, we may conclude without much doubt that we have to deal with a malignant stricture. Of course, in such a condition a palliative operation is absolutely necessary if we propose to prolong the patient's life. That operation consists in making an artificial anus by an opening in the colon, and in case the stricture should not be malignant we would by the resting of the stricture have a better chance for examination and perhaps its cure. We will recommend him to have this operation performed in any event. The operation consists in the usual one performed by Madyl, which is making an incision through the abdominal parietes, pushing aside the omentum, reaching the colon, pulling it through the wound, putting a glass rod under the colon, through the mesentery, either stitching the bowel to the opening or leaving it alone according to the length of the incision that has been made. If, for instance, the incision is a small one (and the smaller the better), it is not necessary to stitch the bowel into the wound for the reason that its agglutination will speedily take place; it is not likely to collapse because the glass rod will be left in position for two or three days. From the third to the fifth day the bowel, which has been raised over the glass rod, may then be incised either by scissors or by the Paquelin cautery, and the opening is stitched to the wound, if required, after which time we may proceed further and remove the stricture by incision of the coccyx, removing it through the pelvis, or the question may arise whether, if it is found to be malignant and constantly growing, we shall allow the artificial anus to remain during the rest of the patient's life. There is no question about the relief afforded by the operation when successfully performed, and under ordinary precautions there is little risk of adding to the patient's danger.

The line of the incision is easily found by drawing an imaginary line from the anterior superior spine of the ilium to the umbilicus. We bisect that by a line drawn at right angles with this line, having it partly about and below the imaginary line, so that by making an opening in that situation we shall come directly upon the colon.

We have now arrived at the peritoneum, which I will incise. I now pass my finger into the rent that has been made in the peritoneum and search for the colon. Usually where there is very much obstruction the colon can easily be felt, and the hard lumps of fæcal matter resting within it. Sometimes, however, it is a matter of more difficulty, requiring lengthening of the incision. That I do not wish to do if I can prevent it. I am now passing in re-

view through the incision certain portions of the intestine as I find parts of the gut entirely empty, indicating that there has probably been a volvulus in addition to the stricture which is present in the sigmoid. I am trying to withdraw the colon as much as possible from below so as to bring it near the sigmoid flexure. The question now to determine is whether the wound is securely closed around the intestine. If not, it is necessary to stitch it; if it is perfectly closed the stitches will be unnecessary. In order to relieve the pressure from being directly over the center we surround it with a gauze compress on the side. If the patient does well, about Wednesday I shall open this with scissors and remove the glass rod. By that time the posterior portion of the intestine will have become securely fastened into the wound.

FRACTURE OF THE GREAT AND SECOND TOES.

This patient yesterday caught his foot in an elevator shaft and sustained a fracture of the great and second toes. We will irrigate the parts, clean off the clotted blood, and examine it. On examination of the great toe I notice that the nail is loose, it simply hangs by the skin. Its removal will enable me to examine the bone a little more carefully. The end of the toe seems to be a mass of pulpified tissue, but I believe it will unite if thoroughly cleaned and treated antiseptically. I shall now after sublimate irrigation suture the anterior flap directly down to the wound, with the expectation that it will unite by primary union.

HÆMORRHOIDS.

This man, complaining of hæmorrhoids, has an external hæmorrhoid and also some condylomata about the anus. We will turn out the inside of the rectum just above the external sphincter with a view to inspecting the membrane. The external pile is sufficiently obvious. I introduce the speculum in the manner which you observe, using my finger as a guide. There seems to be no disease in the interior of the bowel. The external pile is produced usually by direct extravasation of blood. If you adopt the nomenclature of the Royal College of Physicians it comes under the class of extravasation tumors. From a pathological stand-point a tumor is a new growth, but under the present nomenclature we would call this an extravasation tumor. I simply pass a grooved bistoury through the pile and turn out the clot by direct pressure. I think it would be well while the patient is on the table to remove these condylomata with the scissors. We now pack the verge with a bit of iodoform gauze, and it will give him no further trouble.

MALIGNANT TUMOR OF THE LIVER.

This patient has been sick five months, and comes here for the purpose of diagnosis. We find an enormous swelling in the abdomen. Let us hear the percussion note whether it is tympanitic or whether it is fluid. It is a solid swelling. If you notice, the sound is flat in this situation on the left side; it is resonant where the air or gas is in the intestine. The tumor is movable from side to side. The patient is jaundiced. The color of the fæces is variable, alternately white and lead colored, consequently we must look to the liver as the organ probably deranged by the presence of this tumor. Its situation is directly over the liver and would seem to indicate that we have to deal with a malignant tumor of that organ. We might have a hydatid swelling, for hydatids are very common in the liver, but we would not have density of structure. As I pass my fingers down on to the tumor I find it perfectly hard and firm. If you notice, on turning the patient on the side the tumor subsides toward the portion of the body most dependent; it is therefore partly movable under the abdominal parieties. As I grasp the parieties in my fingers and then pass the end of the fingers over the contents of the abdomen I am able to map out, as it were, with my fingers' ends, the exact location of the tumor. It is attached to the liver and overlies the stomach. I conclude then that we have to deal with a malignant tumor, because of the rapidity of its growth, its situation, and in fact that it is solid and not fluid. An exploratory laparotomy would undoubtedly do the man no particular harm and would clear up the diagnosis in this case; but I question the propriety of advising the operation as I think it would only result in exposure of a sarcoma which could not be removed. However, I would be willing to make an exploratory laparotomy at any time he so wills it.

There is one word as to the diagnosis in these cases as between general ascites and these abdominal swellings. If we have a dropsy of sufficient extent to make this extension of the abdomen we would also have a pitting of the feet and legs on pressure. Moreover we would not have abdominal resonance. For instance, at this point (illustrating) we have it soft and resonant. The resonance simply indicates where the gas is present in the intestine, and its absence indicates where the tumor is solid. An exploratory puncture would, of course, determine the contents of the tumor whether it be solid or fluid. Further than that, an examination of the fluid might be made. Under the circumstances I would advise this patient to have an exploratory laparotomy performed. He seems to be in good health, not yet cachectic, and can stand the operation without difficulty.

ATTENUATION OF THE TUBERCLE BACILLUS.

Gramatschikoff (*Centralbl. f.. allgem. Patholgie*, Band ii, No 25) describes a new method by which the tubercle bacillus may be attenuated. Having inoculated 33 fowls with human tubercle bacilli without any positive results, clinical or pathological—at the most only local tuberculosis occurred—he next sought to ascertain what alterations these bacilli undergo and how long their virulence is retained in the organism of the fowl. With this object pure cultivations, enclosed in parchment, animal membranes, and glass tubes closed by permeable membranes were introduced into the peritoneal cavities of fowls. After periods varying in duration, the inoculated material was withdrawn, sown upon glycerine agar, and also placed within the eyes of rabbits. In this way bacilli of diminished virulence were obtained, the degree of diminution being dependent upon the length of stay in the fowl's body. Some were still capable of producing general tuberculosis; the course of the disease, however, was slow in comparison with that observed in control animals, in which tuberculosis had resulted from inoculation with bacilli of the same generation as those attenuated in virulence. These latter, in other instances, produced only local disease, which healed of itself.—*Brit. Med. Jour.*

THE ANTIPHLOGISTIC METHOD AND THE TREATMENT OF ACUTE PLEURISY

By PROFESSOR PETER,
PARIS, FRANCE.

A CLINICAL LECTURE DELIVERED AT THE HÔPITAL DE NECKER.

Gentlemen:—I do not come to combat thoracentesis. It was under Trousseau that I made my first puncture of the thorax, and I am too well acquainted with the beneficial results obtained from such operation to speak ill of it.

What I propose to say about acute pleurisy is, that the disease remains the same, but that it is the treatment of it which has suffered modifications. To show this I will call your attention to the medication of the past and that of the present.

In regard to the first, I will refer to books very little read nowadays, that is, to the treatise on auscultation of Laennec, 1819, the Clinical Medicine of Andral, 1822, and that of Bouillaud, 1837.

For the present I will only call attention to the following points. Laennec says: "In acute pleurisy, when the subject is vigorous and plethoric, the best practitioners of all times and of all countries, have recommended bleeding from the arm, unless the individual be a woman in whom the menstrual period is about to occur. In this instance, bleeding from the feet is preferred. But if the pain and the fever do not subside after one of these bleedings, it will be best in pleurisy, as in all inflammations of the serous membranes, to resort to blood-letting, and, generally, this local bleeding must be repeated until the pain and the fever cease, and also if these symptoms should return. In my opinion, wet-cupping is preferable to bleeding by leeches."

Here you must allow me a slight digression that I may try to make you understand my opinion about the matter, and the absolute usefulness of an energetic interference so timely in the first stages of an acute pleurisy.

By acute pleurisy I understand that phenomenon which occurs in an adult, robust and healthy individual, through the accidental cooling off of a surface temperature which has been produced by a prolonged and active muscular exercise. In

such an acute pleurisy three stages are observed: a hyperæmic stage, a purely congestive one, and as a consequence of this, an affection of the intercostal, and sometimes of the phrenic nerves, constituting, when intense, what is commonly termed a "stitching" pain in the side. Again, and preceding this pain, there are fever characterized by chills, and a condition of general malaise. After a few hours the period of exudation appears, soon followed by the formation upon the pleura of a fibrinous exudate. Then shortly afterwards, there comes on, with a greater or lesser rapidity, the secretory period, with the production of a serous effusion. In the meantime the original pain subsides gradually until it finally ceases, as if the liquid effusion, out of regard, as it were, for the inflamed pleura and the affected nerves, acted as a calming agent. The same results are observed through watering of the eyes in cases of acute ophthalmia.

I shall not dwell long upon the phenomenon of the pain in the side; suffice it for us to know that it is the clamor, the cry of an irritated nerve, situated in the neighborhood of an inflamed pleura; that it is the denouncing manifestation which, after the few hours of a pre-existing fever, comes to point out to us the localization of the malady, and to put us on our guard.

Before the appearance of the fibrinous exudation and, *a fortiori*, that of the serous effusion, the physician has sufficient time to interfere in the production of these two phenomena, and this interference must be proportionate to the intensity of the fever and the acuteness of the thoracic pain.

These are, therefore, the two chief indications: To combat the fever and to prevent the fluxion. This is what was admirably understood by our forefathers when they practised a general blood-letting to combat the pleuritic fever, and when, on the other hand, they applied wet-cupping and leeches, and, one or two days later, a large blister to act against the local inflammation.

Under analogous conditions, if this treatment is put into practice at the beginning of the pleurisy, we obtain a double result: 1. There will be no serous effusion, or at least a very small amount. 2. The duration of the disease is notably shortened. In this manner the general disorder has been averted and the local trouble stayed. Such has been noticed in the first thirteen clinical observations of Andral. This author cites ten cases of acute pleurisy that terminated in recovery; three got well without effusion, and in seven the effusion was slight, but totally disappeared under the antiphlogistic treatment. These ten cases were observed in the period of ten months.

Bouillaud has reported twenty-one observations of acute pleurisy, of which only the first case terminated in death. The antiphlogistic treatment consisted in repeated bleeding, wet-cupping and the application of large blisters. I believe that this treatment is too energetic, and that it may be employed in a more moderate manner, with the same amount of success. I believe, on the other hand, that it was the excess of such measures that, in the hands of Bouillaud, produced a reaction in an opposite direction, and that a treatment which is both rational and efficacious was thus abandoned. But certainly worthy of notice, especially in the observations of Bouillaud, is the tolerance of the system towards these large blood-lettings; the rapidity with which the pain ceased, followed by the abatement of the local trouble; the re-absorption of the effusion and the recovery of the patient. In fact it is remarkable that in thirty-one cases of both Andral and Bouillaud, there was only one death, and this in the case of an individual whose system had been previously run down.

You will not forget the fact that only 1 death occurred in 32 cases of acute pleurisy observed in the course of a year, more or less. I will return to this a little later.

Let us now see what the modern treatment of acute pleurisy is: The fever, which is the first manifestation of the disease, is combated from the start by sulphate of quinine and antipyrine; for treating the pain, the physician of to-day exhibits sometimes a certain amount of thereapeutic audacity, for if the suffering is too intense he resorts to the hypodermatic injections of morphine. By this he hopes to strangle, as it were, the advanced sentinel which is denouncing the localization of the disease; while the effusion is slowly but surely taking place within the cavity of the pleura, simply because nothing is done against the local hyperæmia which is to give origin to the

fibrinous exudation and the serous secretion. There are other practitioners who do still less; who observe the doctrine of the absolute expectant treatment, practitioners whom I call volunteers of the doctrine of contemplation, and who allow the sero-fibrinous secretion to take its course, maintaining that acute pleurisy is a cyclical disease which must terminate spontaneously in 2 or 3 weeks.

I consider it my duty to oppose such a doctrine; in the first place, because you cannot remain indifferent, even if the disease is not shortened by it, towards a means by which you can diminish the pain and thereby the suffering of the patient; secondly, because, in my opinion, the disorder may be shortened; and finally because the inflammatory disease can be rendered less serious by the antiphlogistic treatment.

My learned friend, Sée, calls attention to the fact, in support of his doctrine, that 60 out of 100 cases of acute pleurisy are either tubercular or pretubercular. I confess that this argument is somewhat contrary to the views already expressed; but I still believe that, even in such cases, an active interference is necessary. I will also say that hæmatosis being lessened by the pulmonary tuberculization, it becomes urgent to endeavor to prevent a new diminution of this blood-making process, which necessarily results from the occurrence of the pleural effusion.

It is precisely the non-application of the antiphlogistic treatment, gentlemen, at the beginning of an acute pleurisy, which permits the formation of these large serous collections, and for which we are obliged afterwards to practise thoracentesis---an occurrence which I deplore, and by which a medical is changed into a surgical disease.

What I have endeavored to show is: (1) that the serous effusion may be stayed; (2) that it may be entirely prevented; (3) that a moderate effusion (say from 500 to 1000 grammes, for example) is still a condition for the justifiable application of revulsion, and that thus piercing the chest may be avoided, especially if the disease has not reached its 24th day; (4) that, finally, if the effusion is considerably large (that is, from 1,800 to 2,000 grammes) thoracentesis must be resorted to, even before the 24th day, and preferably by the aspiratory method. In this I am in accord, in all points, with my friend Dieulafoy.

I have before remarked that during the first half of this century, in 32 cases of acute pleurisy only 1 death occurred, and that the absorption of the effusion was rapid. Now, let us see what the facts are in our days:

The serous effusions are not only more and more abundant, but the abundant effusions are more and more frequent also, and these are not only more serious but quite purulent in a large number of cases; so that the operation for empyema has become more and more frequent. Two distinguished surgeons, Gosslein and Richet, have assured me that their surgical life, regarding pleurisy, could be divided into two distinct periods; in the first one, embracing a lapse of from 20 to 30 years, they never had occasion to practice operations for empyema; while during the second one, which corresponds to the present epoch, they have practiced such operation twice or thrice a year. Nélaton, according to Dolbeau, practiced, at an advanced period of his life, the operation for empyema.

Now, there is at least a singular coincidence between this aggravation of pleurisy, the necessity of our having often to perform thoracentesis or an operation for empyema, and the treatment of modern times. I do not hesitate to say that such is not a coincidence but a correlation.

Louis has asserted that nobody ever died from acute pleurisy; but this proposition is too absolute. Laennec affirmed that death was rare, but he does not mention a single case of sudden termination as a consequence of this disease. We have already seen that only 1 death was recorded in the 32 cases of Andral and Bouillaud, giving a mortality of only 3 per cent. I have studied the proportionate mortality from pleurisy, at the Hôpital Necker, during the years 1889, 1890 and 1891, and I find the following statistics: In 1889, 4 deaths in 60 cases; in 1890, 2 deaths in 44 cases; in 1891, 7 deaths in 70 cases; all of which give an average mortality of 7 per cent. during these 3 years, the double of that presented by Andral and Bouillaud.

Let us now consider the question of sudden death. This has been attributed, and not without reason, to the abundance of the effusion, that is, to the generalization of the disease over the pleura. In an interesting work, one of our distin-

guished hospital physicians, Talamon, has reported cases of sudden death by syncope, not only in patients in whom the effusion was of a minor importance, but also in two cases that had generalized fibrinous adhesions. Talamon has investigated the cause of death in such instances. He ascribes it particularly to the rapid formation of a thrombus of the artery or of the pulmonary infundibulum, since the post-mortem of such cases did not offer a satisfactory explanation of the mortal syncope. I believe, myself, that in those cases, in which the disease is so generalized, the inflammatory process has gone so far as to produce diffused adhesions, adhesions which affect the posterior pulmonary plexus, and thus cause, by a reflex mechanism, an inhibition of the cardiac plexus.

I will not say much regarding the part which the nerves play in acute pleurisy. In the first period of the malady the intercostal or the phrenic nerves are deeply affected, and at an advanced stage a functional trouble comes on, followed soon after by inhibition of the nervous mechanism of the heart and consequent death.

There is, therefore, danger in permitting the generalization of the pleuritic affection, because it may result in the production of serous effusions and adhesions, and, in both cases, in an interference with the function of the pulmonary plexus. It becomes, then, necessary to avoid the development and the generalization of the pleuritic inflammation.

To resume: in a frank, acute pleurisy, due to cold, and occurring in a robust and otherwise healthy adult, the effusion may, during the initial stage, be stayed or avoided. Later, when the period of effusion has been established, during the first two weeks, if the effusion is considerable, a cure can be obtained through the application of wet-cupping, followed by one or two blisters. It is understood, of course, by a rational necessity, that the patient may be subjected to diet.

I have said that the serous effusion may be prevented at the beginning of the disease. I can cite cases of this kind to prove my assertion. For instance, to a young lady I advised sulphur baths for rheumatismal pains from which she was suffering, but forgot to state to her that the water should be warm. She took a cold bath. In about ten minutes she began to experience intense chilly sensations which obliged her to get out of the tub. Soon afterwards she was taken with severe chills, a general malaise and a pain in the side. She then sent for me. I arrived about five or six hours after the bath had been taken, and found the patient suffering from fever, an intense pain in the side, and great dyspnœa. On examination I detected a slight friction sound due to a fibrinous exudation, but there was no effusion. I immediately applied wet-cupping, which was followed by a rapid diminution of the pain and of the dyspnœa. I saw the patient in the evening; on the following morning she had no effusion, but I could still notice the pleuritic friction sound. I then applied a blister 10 by 8 centimeters in size, and six days afterwards, the patient had completely recovered, without any effusion having taken place.

I have previously said that when the effusion is about 500 to 1,000 grammes, revulsion will be sufficient to effect a cure. I agree with Dieulafoy in that when the effusion goes in amount above the figure just mentioned, that is, 2,000 grammes or more, so that displacement of the viscera is apt to occur, puncture of the chest becomes necessary. In these cases I have seen (and others have observed analogous results) re-absorption to take place, followed by a cure, through the successive applications of blisters before the third week of the disease had passed, and while fever is still present. In this respect I am in absolute accord with Hardy and Constantin Paul. I could cite a large number of cases of this nature, but I will only relate the following one:—

A very distinguished Paris physician, 50 years of age, suffered an attack of acute pleurisy on the 25th of June, 1881. On the 18th he was asked by some of our learned colleagues to have the chest punctured, calculating that there was two litres of serous effusion already collected. The sick physician stoutly refused, and, on the 19th Professor Hardy was called in consultation, and he (Hardy) advised the application of a large blister. A few days later, having returned from a professional visit which had prevented me from seeing this patient at the beginning of the disease, I told him that in the presence of the abundant exudation, and owing to the persistence of the fever, thoracentesis was urgently

called for. He refused again, and requested me to apply blisters. He had, in all, eight blisters, and "thanks to these derivatives," he wrote to me sometime afterwards, "he had, by the 30th of July, completely recovered." The disease lasted forty-five days, after which our patient entered again into the enjoyment of good health, and was once more able to attend to his own patients.

Now, gentleman, I have cited this case not expecting you to act similarly in a parallel instance, but to show you that when thoracentesis appears to be most urgently needed, it can be avoided if the disease has not gone beyond the twentieth day.

You see then, gentlemen, that, agreeing with my learned friend, Hardy, I must protest, with proofs to support us, against the abandonment of the antiphlogistic treatment, especially *at the onset of acute pleurisy.*

With Constantin Paul, I wait, to practise thoracentesis, until the fever has subsided, and for the disease to have gone beyond the 20th day, because before or at this period re-absorption is possible. Like Proust, and following the example of Trousseau, I am in the habit of evacuating the liquid at once and in a slow manner. Finally, like Dieulafoy, I practise the operation, even if fever is present, when the effusion is so abundant as to cause displacement of the viscera. I will insist upon the danger arising in the generalization of the pleuritic inflammation, which may be the cause of sudden death, and also upon the urgency of practising thoracentesis in such cases.

In conclusion, I will say that to-day, generally, the study of the pathogenic *cause* makes us forget that of the morbid *action.* Particularly in acute pleurisy, we have not evidently ascertained the nature of the morbific action, that is, whether this is due to cold or to infectious microbes. We are only familiar with the processes that occur, that is, with the stage of hyperæmia, the stage of exudation, and the secretory stage. Now, during the presecretory period, which may last from 12 to 24 hours, we have, if called in time, sufficient opportunities to act in order to prevent or stop the occurrence of the effusion. This is what I have tried to demonstrate to you.—*Translated from Le Bulletin Médical, April 27, 1892.*

Communications.

METHODS OF MODERN DERMATOLOGY.*

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The history of dermatology is as ancient as the history of medicine in general, but it is impossible to make a correct account of the literature of cutaneous medicine, owing to the confusion which has existed in the nomenclature of this branch from the very oldest times to the present. Hippocrates can be considered as the founder of Grecian dermatology, other investigators after his time are Cornelius Celsus, Pliny, Galen, Lorry Plenck and Willar of the last century, and an array of prominent writers of this century. It was reserved for the genius of Hebra, to examine critically the enormous material of dermatology, to discard useless material, strengthen and uphold true principles, to properly and scientifically classify dermatological diseases and their forms. We must admire the simplified nomenclature and clear logic of Hebra, his gift of observation and his precise indications for the employment of appropriate remedies, which were in part already in use and in part were first introduced by himself. Assisted by the fertile minds of a Rakitausky, and Ikoda, who built up a new school of pathological anatomy, Ferdinand Hebra became the founder of modern dermatology. Since that period most noteworthy changes have taken place in its therapeutics; the principles first proclaimed by the Vienna school under the general leadership of Hebra, were remodeled with every influential discovery made in the last 20 years, and every new discovered fact and the list of remedies enlarged. And this progress is due to two factors: 1. The better knowledge of the causes of skin diseases, in no small degree due to the perfection of the microscope. 2. The discoveries of new remedies and methods in dermatology. Of these I wish to speak.

Among the most important and efficient enrichments in modern dermato-therapeutics are the salve- and plaster-mulls of Unna. The principles which led to this important progress were those of modern antisepsis,

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aiming at the complete rest of the skin, prevention of friction from clothing, complete exclusion of outer air and its detrimental action on the skin. The basis of this dressing primarily consisted of undressed cotton of various lengths and thickness, which were drawn through an ointment constituted of mutton tallow. In this manner Hebra's and Wilson's ointments were first made. These mulls were covered on both sides with the medicated ointment, and only since of late but on one side. The dressing was adapted and held in place by cotton or mull bandages. It is evident that a dressing of this kind facilitates the treatment of ambulatory patients, even if the skin lesion should be a very extensive one. Especially eczemas in the region of the anus, scrotum and axilla and lower extremities can be treated with pronounced success. I regard this treatment of eczema of the nostrils and ears (external auditory canal) as the very best and efficient. In 1882, a most decided progress in the plaster-mulls was made by Unna, when he introduced the so-called gutta-percha plaster-mulls, which meet any demand of a continual and impermeable dressing. It has the great advantage of not irritating the skin and being very adherent. In many persons of irritable skin you will have found that the application of an ordinary adhesive plaster will cause dermatitis and eczema of the affected and adjacent parts. An important factor likewise is the macerating action of the gutta-percha and similar material. Already Hebra used rubber gloves, stockings, caps, and other articles of clothing in the treatment of chronic eczemas, on account of the macerating effect produced by the same. They are likewise of great value in all conditions of hyperplasia of the epidermis and keratoses, due to a variety of causes, also in certain forms of psoriasis and the obstinate papular syphilides as they occur in the palm of the hand and soles of the feet. A vast number of medicinal remedies are combined with the salve-mull and gutta-percha plaster-mull, the firm of P. Beiersdorf & Co., Altona, Germany, manufacturing twenty-seven of the former and 131 of the latter.

Some years ago Prof. Pick, of Prague, suggested the use of gelatine as a vehicle for various medicaments in dermatological practice. He employed a mixture of gelatine and water over which, after its application to the skin, was smeared a thin layer of glycerine. Unna and Beiersdorf combined the gelatine and glycerine directly and they found that a definite relation must exist between the amounts of glycerine, gelatine and water taken and the percentage of drug employed. The formula is as follows:

℞ Zinci oxydi.....30,0.
Gelatinæ albæ.....40,0.
Glycerinæ.....50,0.
Aquæ.....90,0.
M.

The gelatine preparation is prepared for use by being melted, the tin containing it being placed in a vessel of boiling water—and painted on the parts with a stiff brush. The jelly is then covered with tissue paper or dried with cotton-batting which forms a thin coating. As much water is added as is necessary to form the proper consistency. It is a very valuable preparation where a complete protection from external influences is demanded as we find it in many forms of eczema, particularly the squamous variety. The action of the gelatine can of course be but a very superficial one as its constituents do not penetrate the epithelial layer and resorption is impossible. However, as a protective dressing its value cannot be over estimated. Any medicinal remedy can be combined with it, particularly ichthyol, sulphur, sublimate, acetate of lead, chrysarobin, pyrogallol, etc.

For the treatment of isolated lesions of the skin the treatment by salve-sticks and paste-sticks has been advocated by Unna and Brook. The paste-sticks are soluble, the salve-sticks insoluble. The basis of paste-stick is starch, sugar and mucilage of tragacanth; the basis of the salve-sticks consists of

℞ 35 pts of wax
55 " " olive oil
10 " " oil soap free of water.

They are useful in localized eczema, mycoses, lupus, syphilides, parakeratoses and hyperkeratoses, anomalies of pigmentation, ulcers, etc.

Medicated soaps so far as they have been found up to date in market are articles of but slight value, and to Unna again belongs the credit of having obtained preparations which fulfill the just demands of dermatologists. The basis for the medicinal agents consists of soap containing a surplus of fat. It is prepared out of beef tallow and a mixture of two parts of soda-lie and one part of potash-lie; to the mass

is added a sufficient quantity of olive oil that about 4 per cent. remains unsaponified, which is the surplus fat.

Although the scientific treatment of skin diseases by soaps has been up to date but little in use compared with the treatment by salves, plasters, and pastes the advantage of their application is self-evident. This method is not only justified but absolutely indicated in all those cases where the diseased skin is rich in fat due to an increased secretion from the sebaceous glands and sweat ducts. In all these cases it would be imprudent to add more fat in form of an ointment to an already fatty skin, but to use a soap which will form an emulsion with the superfluous fat of the skin. By removing this fat which is on the surface and also that which fills up the orifices of the glandular ducts the medicinal remedy incorporated in the soap is allowed to penetrate and act on the inner walls of the sebaceous and sudoriferous ducts. This is of prime importance as we know that especially in parasitic diseases the source of the affection is often deeply buried in the glandular organs of the skin, where it can develop anew, extend to the surface and cause a so-called relapse, which really means that the germ of the disease has not been completely eradicated. The treatment by soaps is thus far particularly indicated in diseases of a parasitic nature, in tinea, sycosis, acne, psoriasis, etc. With regard to their chemical properties soaps are divided into

Alkaline soaps (with a surplus of free alkali.)

Neutral soap (in which all alkali is combined with the particular fat acid.)

Acid soaps (with a surplus of free weak acid.)

As far as my experience goes in the treatment of skin diseases by medicated soaps the results have not been as satisfactory as proclaimed, however, I use them very frequently regarding them as a most valuable expedient in the treatment of many skin lesions.

The action of drugs applied to the skin in the form of spray is a very energetic and applicable one. The practical facts harmonize with the physiological fact that the power of resorption of volatile substances by the skin is a great one, which is especially true when the skin is denuded of its epidermis. This method is especially indicated where the skin or mucous membrane is free of access, as the external auditory channel to the tympanum, the nose and pharynx, the urethral and anal mucous membranes; likewise fissures as caused by eczema, psoriasis, syphilides or the natural folds behind the ear, the nipple, the fingers and toes. Certain forms of mycoses as pityriasis vesiculæ and tinea tonsurans are readily cured by a spray of a 10 per cent. chrysorubin solution.

An important part of recent therapeutics of the skin is played by mechanical treatment by means of Valkmann's spoon, the sharp and pyramidal prong fastened to the spoon, as modified by Auspitz, and the flat, double-cutting lancet-needle for cutting out vessels in the skin; the various apparatus for the same purpose, finally the electrical needles and combination of needles for the destruction of the hair-follicles, the latter being especially recommended in America in recent times. In many skin diseases, especially nævi, pointed condylomata, warts, and superficial epitheliomata, pustula, acne and sycosis, lupus, tuberculosis and erythematosis, mechanical treatment either alone or combined with other medicinal agents constitutes a very useful, occasionally the sole therapeutic method, attended with good results.

It may be of interest here to allude to an apparatus of late devised for producing local anæsthesia. I first saw it used in the clinics of Prof. Besnier; it consists of a cylinder containing chloride of methylene gas under high pressure, which escaping rapidly liquefies, causing local anæsthesia. It is without doubt a great progress in local anæsthesia, particularly as injections of cocaine are liable to cause alarming symptoms at times, and the use of the ether spray combined with the actual cautery is liable to cause explosion. The local action of chloride of methylene is similar to that of ether, but more rapid and intense. It first causes a local irritation, then after a few seconds a diminution of sensibility, the skin turning white and anæmic and covered with frost, which then is the proper time to operate. If the anæsthesia is carried too far there is great danger of causing deep-seated gangrene.

The opening of abscesses, felons, excision of chancroids, the operation for phimosis, opening of pustules, extirpation of atheromatas—in fact all superficial minor operations form the indications for its use. In dermatology it is applied principally

for scarifications, scraping with the sharp spoon in case of lupus and similar minor operations. In conclusion I will draw your attention to the Micro cauter, a modification of the Paquelin cauter, proposed by Dr. Unna. It consists of the ordinary cautery point to which a copper wire is affixed which enables the heat to be conducted to a very small point. I employ it principally in nævi and in dilated vessels as we find them in venous lesions, especially acne, rosacea, telangiectases, lupus, etc.

After the conclusion of Dr. Frank's paper, the following discussion occured:—

Dr. H. H. Sercombe: How much of the surface is anæsthetized by the apparatus you have shown us?

Dr. Frank: A spot about as large as a dollar.

Dr. S. W. French: Have you used collodion on the skin?

Dr. Frank: I have never used it in place of the gelatine, but I think the latter preferable.

Dr. J. A. Bach: I should like to ask, in cases of eczema of the internal auditory canal, whether the doctor uses plasters or ointments.

Dr. Frank: I employ salve-mulls, especially the double sided ones, cut out about the length of the canal, rolled up, put in and pressed around on all sides, especially through the nostrils.

Dr. D. J. Hays: In regard to the gelatine treatment the doctor spoke of, I have used that during the past three years with remarkable success in some cases of squamous eczema. Cases that have resisted treatment for years rapidly improve under this method. The gelatine is simply painted on the part affected, the application being allowed to remain for three or four days or a week. The plasters cannot be applied in all places, but where they can be I have met with remarkable success.

I regard the ointments generally that are put up in our apothecary shops as doing more harm than good. That, at least, has been my experience with them. They are rough and irritating to the skin, and nine times out of ten are without good effect, but treatment with these plasters, and especially with gelatine, applying the latter with a brush, will cure cases that have resisted all other kinds of treatment for years.

Dr. French: Do you confine yourself to the remedies you have mentioned or do you use lotions also?

Dr. Frank: Of course I use lotions and other remedies. I do not limit myself to the remedies I have spoken of, but my subject is Modern Methods of Dermatology, and these methods have all been adopted within the past few years.

THE USE OF HOMATROPINE DISCS IN REFRACTION.

ARTHUR D. MANSFIELD, M. D.

ASSISTANT SURGEON AT THE PRESBYTERIAN EYE, EAR AND THROAT CHARITY HOSPITAL, BALTIMORE, MD.

It often becomes necessary in testing the refraction of an eye to temporarily completely paralyze the accommodation, thus rendering the eye incapable of exerting any voluntary effort toward reading or near work of any kind being accomplished. When an eye is in a condition to only appreciate distant objects then we can find the defects much more readily than when the accommodation is allowed full play and scope.

In the majority of eyes demanding aid in visual defects we can dispense with the use of a mydriatic and can find out the defect of such an eye unaided, but in some cases, the number varying, a mydriatic is demanded and the indications for it absolutely positive. Now comes the important question, what mydriatic shall we use? The great objection to mydriatics is that the mydriasis lasts too long, entails too much discomfort upon the patient, renders an important organ useless; and in those who depend upon their vision for their livelihood the question is a serious one. The demand on the part of the eye for aid in the shape of properly adjusted lenses is necessary, and to accomplish this the paralysis of the spasm of the accommodation is also necessary. Then what shall we do? We want a mydriatic that will paralyze completely the muscular ability of the eye, yet at the same time allow the eye to recover quickly from the influence of such an action. Before a mydriatic of such a character was discovered, their use for refraction was a serious matter to the patient, but in homa-

tropine, we find a mydriatic causing but little discomfort. Homatropine has been used in many forms—the aqueous solution, the oily solution, and the discs of homatropine hydrobromate combined with the hydrochlorate of cocaine.

My intention is to draw particular attention to the use of the discs of homatropine and cocaine, yet I cannot refrain from mentioning the other forms in which we use this mydriatic. From the aqueous solution we get excellent results if we will only wait long enough and instill the drops with sufficient frequency. With the instillation of a solution of homatropine mydriasis and complete paralysis of the accommodation do not follow until 30 to 45 minutes have elapsed, which is rather longer than the pressure of hospital work will allow; what we need is something that works more rapidly. Such a substance was thought to be found in the oily solution of homatropine but my experience has been very limited and what I have had has been rather unfavorable on account of its setting up considerable inflammation in the conjunctivæ and producing such lachrymation and photophobia as to render its use absolutely painful. My experiences may not accord with that of some others. Nevertheless I have abandoned the oil for another form from which I have had most pleasant and brilliant results.

We all are aware that with the least spasm of the accommodation where astigmatism occurs that it is almost useless to attempt to properly adjust glasses to correct the faulty meridian, as the faulty meridian will migrate in as many different angles as are shown on the astigmatic chart. To bring out the only faulty meridian (or meridians) it is necessary to use the mydriatic, and, as I have already endeavored to point out, homatropine is the substance best adapted to do this, and the form in which it is most efficaceous is in discs as prepared by Jno. Wyeth & Bro. of Philadelphia. These ophthalmic discs are very small, only about one-eighth inch in diameter and as thin as a piece of writing paper, made of the purest gelatin, devoid of all irritating substances, and each contains hydrobromate of homatropine gr. $\frac{1}{30}$, and hydrochlorate of cocaine, gr. $\frac{1}{30}$. The presence of the cocaine is to facilitate the absorption of the homatropine by the cornea, the reason being that cocaine exerts a peculiar disintegrating effect upon the epithelium of the corneal substance, thus allowing the homatropine to come in closer contact with the nerve fibres of the cornea which ramify in all directions.

The discs when placed upon the everted conjunctiva of the lower lid, and the lid with the disc allowed to return to its proper position. At once there is a feeling of discomfort, due of course, to the presence of the foreign body, which discomfort lasts but a short while, for as soon as the disc dissolves the uneasiness disappears. The dilatation begins almost immediately and in from 7 to 10 minutes the mydriasis is complete. It is not in all cases that homatropine will give us complete paralysis of the accommodation, there are some cases, as we all know, who have much refraction to work, that require the continued use of atropine itself. But aside from such cases the use of the homatropine will give excellent results, and I particularly recommend to the attention of my readers so disposed to follow my advice to give the gelatine ophthalmic discs a trial.

My reasons for preferring the discs to either the aqueous or oily solutions of homatropine are as follows: In the first place we have a definite quantity instilled into the eye and hence we obtain a definite result if the discs contain the definite amount, and we have every reason to believe that they do.

Secondly, the discs being dry are not subject to the same fungoid growths and changes in composition to which the aqueous solution is subjected. Consequently the discs can be kept for any length of time, while age impairs the efficiency of the aqueous solution.

Thirdly, the action of the discs is more rapid by half, in some cases by two thirds, than the solution of the drug.

Fourthly, in using the solution there is always more waste than in the form under consideration, which is quite a consideration in the use of such a drug as homatropine. The drug is a useful one no matter in which form we use it, and cannot well be dispensed with in our present work, but the desires of the age are always for the better, no matter how small the difference may be, especially when the difference is a question of time combined with efficiency.

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A CASE OF CRUSHED KIDNEY CAUSED BY A RAILWAY ACCIDENT.

By HERMAN MYNTER, M. D.,
BUFFALO, N. Y.

The following case is of peculiar interest, as the injury is one very frequently produced by railroads and very fatal in its consequences.

On Jan. 27, 1891, I was called to Oil City, Pa., by a dispatch, stating that a man had been severely injured by a railroad accident, and that probably a laparotomy would have to be performed. On arriving, late in the evening, I saw the patient, Mr. A. Wood, aged twenty-two, and learned from his attending surgeons the following history:

Late in the evening on Jan. 23, four days previously, he was caught obliquely between the bumpers while coupling cars. He stated then that he was not seriously hurt and could continue work as brakeman on a freight train. He actually did ride thirty miles on the train, and then had to give up on account of faintness, pain and vomiting, and was brought back to Oil City, where Dr. Coulter was called to see him on Jan 24, at 3.30 a. m. He found no visible injury, no fracture of pelvic bones, no particular tenderness in abdomen, except in right iliac region, where he had considerable pain by pressure. No ecchymoses were present anywhere. At this time he was considered seriously hurt. During the day (Jan. 24) the patient could not urinate and was in great distress on that account. He managed at last to empty his bladder and the water contained a great amount of blood. After that his bladder was emptied with a catheter three or four times a day and the urine continued to contain more or less blood.

On January 26, the temperature began to rise, being 102.5° but afterward gradually receded to 100.5°. The pulse ranged from 100 to 108. On the same day tympanitis commenced, although not excessive. Some flatus were passed on January 29. No hiccough. On examination the patient was seen to be a strong, healthy young man. Temperature, 102°; pulse, 108, full and regular.

Considerable meteorismus was present, with tenderness in right iliac region. No particular tenderness in left side of the abdomen. The meteorismus prevented a careful examination of the abdomen. Over the right lumbar region a diffuse ecchymosis and some fullness and muscular rigidity were seen, and he was very tender upon deep pressure here. There were slight ecchymosis around anus and perineum.

The urine was normal in quantity, but intimately mixed with blood, and of a dark, dirty color. It contained no coagula of blood. His bowels had not moved, he having been kept under the influence of opium since the injury.

The question of diagnosis was not discussed. It was evident that the man was seriously hurt, but I thought we could exclude any injury to organs in the abdominal cavity. A crush or rupture of the bowels would probably have terminated fatally before the time by diffuse peritonitis, of which there were no signs. True enough, he had considerable meteorismus, but not more than could be accounted for by a slight traumatic peritonitis and the continued opium treatment. The normal quantity of urine, of course, excluded rupture of the bladder, not to mention the absence of diffuse peritonitis. A rupture of spleen or liver would probably have terminated fatally by internal hæmorrhage in a short time.

The ecchymosis over the right lumbar region, on the other hand, the deep-seated pain and swelling here, the muscular rigidity, the intimate mixture of urine with blood, the fact that he vomited immediately after the accident, but otherwise was able to travel thirty miles and then first became faint and had to give up work, and lastly the tenesmus of the bladder pointed directly to the right kidney as the seat of lesion, and I thought I was justified in diagnosing a rupture of this organ.

The next question, whether he could be removed to Buffalo, as his family insisted upon, was settled with the diagnosis, and Dr. Coulter and I left that same night with the patient on a special train, and arrived at Buffalo at 6 o'clock on the morning of January 28, the patient having stood the journey well. I had him transferred to the Emergency Hospital, and gave orders to have him take ℥i of epsom salt immediately, and ℥ss every hour afterward till copious evacuations occurred, and to have him transferred to the Sisters' Hospital

for operation at 11 o'clock. On his arrival there he had several copious evacuations, with the result that the meteorismus had disappeared. An indistinct deep swelling, with intense tenderness by pressure, could now be felt in the right iliac region. Under ether narcosis, exploratory incision of the right kidney was made in the usual way by an incision four inches long and two and one-half inches from the spine, extending from twelth rib downward toward posterior superior crest of the ilium. Having reached the lumbar fascia, the usual yellowish-white color was seen changed to an intense dark color from infiltration of blood. On passing through this fascia a large cavity was opened, containing about a pint of dark bloody fluid and coagula. The lower half of the kidney was found crushed to a pulp, and felt very much like an epithelioma of the uterus in the process of disintegration.

The question of nephrectomy was now in order, but bleeding from the crushed kidney was so copious by the slightest touch or manipulation, that all I could do was quickly to remove the blood coagula, disinfect the cavity with corrosive sublimate and then pack it firmly with iodoform gauze, over which an antiseptic dressing was applied. One or two results were possible. Either the crushed parts might become eliminated by and by, and under favorable circumstances recovery might take place, or else, the bleeding having stopped and inflammatory thickening and adhesion having occurred, a nephrectomy might, later, be performed.

On Feb. 3, urine was noticed to pass through the wound. The dressing was changed without bleeding, and a new one applied. On the same day the water commenced to clear up, although still containing considerable pus. He gradually improved, the large cavity contracted more and more, the urine became more and more normal, the crushed parts of the kidney came away by irrigation, and on March 16 he left the hospital with the wound healed, with the exception of a small fistula, through which scarcely anything was discharged. The fistula has since healed completely, and the patient is in excellent health.

General Remarks.—I desire to add a few remarks on the subject of crushed kidneys. In regard to the ætiology of ruptured and crushed kidneys, blows, falls and crushes are mentioned as the most frequent causes, not considering the cases which are produced by gun-shot wounds, etc. A quite frequent cause, probably the most frequent, are crushes between the bumpers of railroad cars. In "International Encyclopædia of Surgery" two cases are mentioned. One was that of a man aged twenty-one, who was struck by the bumper of an engine. He vomited and complained of great pain beneath the ribs. Next day bloody urine was noted, which gradually increased, so that great tenesmus of the bladder occurred from coagula in the bladder. A dull swelling formed in the left side of the abdomen, tympanitis and delirium supervened and death occurred on the twenty-sixth day. The left kidney was found ruptured across the middle and the lower segment crossed transversely by numerous fissures. A large cavity was found surrounding the broken kidney, filled with grumous, offensive blood, clots and urine. In the peritoneum, forming the anterior wall of this cavity, there was a ragged rent in a thin slough, through which offensive serum was found to exude into the peritoneal sac.

The other case died on the eleventh day, a tumor having been observed on the left side, with similar symptoms as in the previous case. The left kidney was found completely divided through the pelvis, and the two halves widely separated by blood and urine, which reached behind the peritoneum as high up as the diaphragm and as low down as the insertion of the psoas muscle on the femur. A kidney may become completely torn through, either transversely or longitudinally, there may be several small surface tears, or it may be pulpified, as in my case.

The first and principal danger is the bleeding, which gradually may reach such proportions that strangling of the peritoneum from pressure occurs. If a large branch of renal artery is torn death may occur quickly. If the patient survives this danger he stands an excellent chance of succumbing to a perinephritic abscess. Can you imagine a better chance for the development of a genuine abscess than a crushed kidney with a collection of blood and urine in the loose, fatty and easily destroyed tissue in the retroperitoneal space?

It is true that there are a number of recoveries from ruptured kidneys on record,

the principal symptoms of which were hæmaturia, but, to say the least, it is questionable whether they were cases of ruptured kidney! Hæmaturia is not necessarily a symptom of ruptured kidney, occurring, as it does, from contusions, renal calculus, acute nephritis, etc.

On the other hand, a ruptured kidney may exist without hæmaturia if the ureter becomes plugged by a clot or completely torn across, so that neither blood nor urine can reach the bladder. In regard to the symptoms I can give no better description than that of Henry Morris, surgeon to the Middlesex Hospital in London:

"If after the abdomen has been run over or the person has fallen or been struck on the abdomen or loin, faintness, coldness, vomiting and abdominal pains follow; if on the day of, or the day after, the accident, and whether the catheter be required or not, the urine is found to contain a quantity of blood and blood clot, and if after several days blood clots continue to pass, or pus as well as blood is voided in the urine; if, moreover, there is pain along the course of the ureter, with retraction of the testis, or a rigid and prominent state of the muscles on one side of the abdomen, with frequent desire to micturate; or finally, if a tumor, dull on percussion, forms in the loin, or lumbar or hypochondriac regions of the abdomen, accompanied or not with signs of local peritonitis—there are safe grounds for believing that either the kidney or its pelvis has been ruptured."

The prognosis, at best, is doubtful, and the mortality great. Dr. Otis gives statistics of 27 cases, of which 16 died; a mortality of 59 per cent. Maas gives another table of 71 cases, of which 34 died; a mortality of 48 per cent. Both added together give 98 cases with 50 deaths; a mortality of 51 per cent., all for subparietal injuries.

In compound injuries, by gun-shot wounds or penetrating instruments, the mortality is still greater. In the "Medical and Surgical History of the War" 78 such cases are mentioned, 52 of which died; a mortality of 67 per cent. In none of these were operations performed.

When we, lastly, consider the treatment, then I believe that very little reliance can be placed in the usual administration of opium, ergot, astringents and cold applications, except in the lightest cases, which would probably recover without treatment. Considering that an exploratory incision of the kidney region under antiseptic precautions is an operation absolutely devoid of danger, and that by no other means are we able to satisfy ourselves of the amount of injury done or prevent dangerous and fatal complications from occurring, I am strongly in favor, with Simon, of employing this measure as a preliminary step in all cases where there are symptoms of ruptured kidney. If we should find the diagnosis wrong or the injury less than we suspected, no harm will have been done. If right, we are in a position to judge about the severity of the lesion, and the means to be used in order to meet the dangers, be this ligation of ruptured arteries,—nephrectomy, if possible, in completely crushed organs, or simply, as in my case, removal of clots of blood, disinfecting of the cavity, and packing with iodoform gauze, leaving the wound open for drainage, and referring the question of nephrectomy to a future time.

That even in such a case nature can accomplish wonders, and that nephrectomy may be superfluous, is well shown in this case.

THE VISUAL FIELD IN EPILEPTICS AND MENTALLY DEFICIENT PATIENTS.

Lombroso (*Rec. d'ophthal.*, August, 1891) draws the following conclusions from his observations: 1. The visual field is remarkably limited in epileptics and idiots. 2. There is a constant irregularity at the periphery of the field, and the line of demarkation appears irregular and sinuous, sometimes forming actual peripheral scotomata of very inconstant relation. 3. The field is more limited on the right side in the lower hemisphere, and on the left side in the upper hemisphere, thus forming a partial hemianopsis to the right below and to the left above. This he calls a partial heteronymous vertical hemianopsia. 4. In some cases there was an extreme limitation of the field due to neuroretinitis. 5. In all, the field for color was limited, its form following constantly that for white, but more or less regularly. 6. The field for blue and that for red cross at different peripherical points. 7. In almost all cases the ophthalmoscopic examination was negative. 8. The visual acuity was entirely independent of peripheral vision.

CASE OF PERITYPHLITIS.

By J. P. TUCKER, M. D.,
OVERTON, TEXAS.

I was called April 17th, 1891, to see Mr. D. J's little son, aged fourteen years. I examined the patient and found considerable tenderness in the right iliac fossa; patient complained of an excruciating pain all the time; temperature 102°, pulse 130, respiration 38. I gave 5 grains of calomel and ½ grain of pulv. opium, 5 grains of antifebrin to reduce temperature, then 3 grains of sulphate of quinine, every four hours, ⅛ gr. sulphate of morphine as required to relieve pain, turpentine stupes over bowels, but my little patient continued to suffer pain. On the morning of April 26, I discovered an abscess about two inches below and 1½ inches to the right of the umbilicus. I explored the abscess and found pus deep-seated. I made a free incision through the abdominal wall into the sac; at the time I operated I think it discharged 20 ounces of thin milky-looking pus, the odor of fæcal matter. The father of the little patient says he is satisfied it discharged a gallon of pus in all it discharged in four weeks. I put in a drainage tube after operation; the treatment was iron, quinine and good rich food in the form of fluids, with morphine as required to relieve pain; bowels kept in soluble condition. The little patient says about three weeks before the abscess developed, that he jumped off a stump and the end of a hoe handle struck him in the side where the abscess formed; about four weeks after it ceased to discharge, the little unfortunate patient went out horseback riding with his brother and they ran a horse race, the horse stopped suddenly and and threw him on the horn of the saddle and another abscess developed in the same place, and it opened spontaneously. This time it discharged two weeks.

Ætiology.—Perityphlitis is usually the result of extension of inflammation from the vermiform appendix or its rupture from ulceration. It may be due to the extension of tubercular, typhoid, or dysenteric ulcers in the cæcum and to the lodgment of foreign bodies in the vermiform appendix. Caries of the spine or of the pelvis have induced it. Traumatism is an occasional cause: it is rarely of spontaneous origin. Of the symptoms in a few instances of perityphlitis, especially those supervening on typhlitis, there will be a history of colliсky pains which radiate outward from the cæcal region with more or less irregularity in the action of the bowels. There is pain in the thigh accompanied by numbness and a sense of formication in the right lower extremity, due to pressure of the tumor upon the nerves. This pain is deep-seated and much increased by flexing the thigh upon the abdomen. Rigors and febrile movements are usually slight. In extensive perityphlitis, the patient cannot raise the right thigh, either on account of the pain or from interference with function of the nerves from the pressure. When the abscess is of large size there may be œdema of the limb, the parts in the vicinity of the cæcum are very tender to pressure, and the patient usually lies on the right side with his thigh semi-flexed so as to relax the psoas and iliac muscles. As the abscess increases in size there is in adults constipation and a tendency to vomit; in children the bowels are commonly loose and pain in the stomach will have been an early and prominent symptom. When a perityphlitis arises as a typhlitis is disappearing, a painful tumor more deeply seated than in typhlitis will make its appearance. The little patient referred to finally made a good recovery.

HYDROGEN PEROXIDE AS A DISINFECTANT OF WATER.

Dr. Altehoefer, after giving references to the literature of the subject, gives his researches on the disinfectant power of H_2O_2 dissolved in water. He finds that the addition of 1 per 1,000 to ordinary drinking water, to drinking water containing sewage, or to water containing typhoid bacillus or cholera bacillus is quite sufficient to destroy the various saprophytic and pathogenic organisms contained under these conditions, if it is obtained perfectly fresh and kept in good condition, and if it is allowed to act for a period of twenty-four hours. It is specially valuable for the disinfection of drinking water because it does not affect the taste, does not alter the color, and in the proportion mentioned is perfectly innocuous. As regards cost, he calculates that sufficient drinking water—say 10 litres—for a family may be sterilised by means of H_2O_2 at a cost of about 5 cents per diem.

Selected Formulæ.

ECZEMA.

Dr. Hardy considers internal treatment of the greatest importance in eczema after the acute stage is passed, and arsenic as the most important remedy. He gives the arseniate of soda in one-tenth of a grain dose, once daily. Dr. Brocq thinks internal treatment of importance in eczema, and prescribes in strumous cases cod-liver oil or a syrup containing iodine; in rheumatics, alkaline waters; in gouty subjects, colchicum, digitalis, etc. For eczema capitis the following local application is advised:

℞ Napthol.
Camphor.
Resorcin.....āā gr. x.
Sulphur.....ʒ j.
Vaseline.....ʒ j.

DIARRHŒA MIXTURE.

℞ Tinct. opii.
Tinct. catechu comp.
Spir. camphoræ.....āā part. aqu.
Mix. Dose.—30 drops in water after each evacuation. If diarrhœa persists or increases, double the dose.

—*Velpeau.*

PILLS FOR DYSMENORRHŒA.

The following (*La Cronaca Medica*, September, 1891,) is recommended:

℞ Camphor, in pulvere.....cgrams. 5.
Pulv. Doveri.....gram. 1.
Extr. hyoscyam.....cgrams. 5.
Sufficient for ten pills. One pill every hour until the pains disappear.

INUNCTIONS OF IODOFORM IN PULMONARY TUBERCULOSIS.

The following are two forms in which Flick employs iodoform by inunction in the treatment of pulmonary tuberculosis:

℞ Iodoform.....ʒ j.
Ol. rosæ.....gt. j.
Ol. anisæ.....f ʒ j.
Ol. murrhuæ.....f ʒ ij.—M.

℞ Iodoform.....ʒ j.
Ol. rosæ.....gt. j.
Ol. anisæ.....f ʒ j.
Ol. olivæ.....f ʒ iij.—M.

—*News.*

A SALVE FOR THE TREATMENT OF EXFOLIATIVE MARGINATE GLOSSITIS.

Dr. Besnier (*Le Bulletin Médical*, No. 9, 1892) recommends the following salve:

℞ Hydrochlorate of cocaine.....cgrams. 5.
Balsam of Peru.....āā gram. 1.
Boric acid.
Vaseline.....grams. 30.
Apply locally twice a day.

INHALATIONS OF THE ESSENCE OF TURPENTINE IN FIBRINOUS PNEUMONIA.

Dr. G. Slepianin (*La Semaine Médicale*, No. 56, 1891) has found inhalations of turpentine of great service in fibrinous pneumonia. He uses the following mixture:

℞ Esseent. terebinthin, Glycerin pure..āā 30 grams.
Aq. destillat.....180 grams.
Sufficient for five or six inhalations.

This may be inhaled five or six times a day by means of a spray. Each inhalation should last five or six minutes, the patient lying quietly upon his side and breathing tranquilly: now and then let him take five or six long breaths. The writer found that the cases treated by this method ran a very mild course, while the patients were in a state of comparative ease.

DIARRHŒA MIXTURE.

℞ Tinct. opii.
Tinc. rhei.....āā fl ʒ ss.
Tinct. catechu co.....fl ʒ j.
Ol. sassafras.....*m* xx.
Tinct. lavand. co.....q. s. ad. fl ʒiv.
Mix. Dose.—A fluidrachm after each movement.

—*Loomis.*

FOTHERGILL'S TONIC (CHARITY HOSPITAL.)

℞ Sulph. quinine.....16 grains.
Sulph. strychnine.....½ grain.
Citrate potass.....30 grains.
Tinct. chlor. iron.....300 minims.
Syrup.....1 fluid ounce.
Water to make.....āā 4 fluid ounces.—M.
Dose, a teaspoonful.

LINIMENT FOR NEURALGIA.

Some eighteen years ago Mr. Thomas Edison, the wizard of Menlo Park, suffered terribly from neuralgia, and applied to his face, externally, the following neuralgia lotion. I made it for him several times, and, although I have not seen it used since.

℞ Chloroform.....2 fluid ouoces.
Sulphuric ether.....1 fluid ounce.
Alcohol.....1½ fluid ounces.
Chloral hydrate.....2 ounces.
Camphor.....1 ounce.
Morphine sulph.....6 grams.
Oil peppermint.....1 fluid dram.

This, however, we do not think the druggist would be justified in supplying on a written request from a person unknown to him and without knowledge as to the method of use intended by the party sending the order.

—*Editor Pharmaceutical Record.*

THE PYLORIC PAIN OF DYSPEPTICS.

Dr. Coutaret (*La Semaine Médicale*, No. 8, 1892) recommends the following mixture as efficacious:—

℞ Saturated chloroform water.....gms. 300.
Syrup of columbo.....gms. 100.
Extract of cannabis indica.....cgms. 10.
A teaspoonful every half hour until the pain ceases.

CYSTITIS.

Dr. A. W. Marsh (*Therap. Gazette*) recommends oxalic acid. His formula is as follows:

℞ Acid. Oxal.....gr. xvj.
Syr. arrant. cort.....ʒ i.
Aq.....q. s. ad. ʒ iv.
M. Teaspoonful every four hours.

BALDNESS.

℞ Tinct. jaborandi.....ʒ iv.
Glycerin.....ʒ ij.
Lanolin.....ʒ iij.
Sig.: Rub a little into the scalp every evening.

—*Pharm. Era.*

TREATMENT OF PSORIASIS OF THE HEAD.

The following treatment is applicable only in cases of limited psoriasis and in the absence of all irritation of the scalp. It is recommended by Besnier and is as follows:—

1. The following ointment should be applied daily to the affected part:

℞ Sapo. viridis.
Vaselini.....āā 100 parts.
Ichthyol..... 10 parts.
Acid. salicylic.
Acid. pyrogallic.....āā 5 parts.
M.

This should only be applied to small lesions on account of the high proportion of active ingredients.

2. Cease making applications as soon as any signs of irritation put in an appearance.

FORMULA FOR THE WINE OF COCA.

The following is recommended (*Pharmaceutische Post*, No. 27, 1891) as an excellent formula for the preparation of the wine of coca:

℞ Coca leaves.....ʒ iij.
Cognac.....ʒ jss.
Sherry wine.....Ojss.
Hungarian wine.....ʒ vj.

Macerate for several days and add seven grains of citric acid. Allow this mixture to stand for several days and then filter.

SYSTEMIC INFECTION FROM GONORRHŒA.

At the late meeting of the Southern Surgical and Gynæcological Association, Dr. Bedford Brown, of Alexandria, Va., read a paper on this subject. He cited five interesting cases of systemic infection from gonorrhœa. He believes that there are two channels for the absorption and transmission of the gonorrhœal microbe into the general system. One is by continuity of surface over the mucous membrane of the genito urinary tract from the urethra to the kidneys. The other channel is through the medium of the great lymphatic system, from the lymphatics of the urethra to the inguinal glands, thence through the lymphatics of the system into the general circulation. He believes also that this microbe, so transmitted, is lodged at different points in the organism. The gonorrhœal microbe transmitted by continuity of surface over the genito-urinary tract, invariably induces specific suppurative inflammation. On the contrary, when transmitted through the lymphatics, the inflammation is not of a suppurative character, but assumes peculiar types; then the contact of the infectious microbe with the mucous surfaces produces suppurative prostatitis, cystitis, ureteritis, pyelitis, aud then pyonephrosis. The absorption of the same through the lymphatic channels first sets up lymphangitis of the lymphatics of the urethra, then lymphadenitis of Cowper's glands, then of the inguinal glands, and inflammation of the connecting lymphatics. By further absorption it may induce septic phlebitis on the thigh, and finally synovitis, endocarditis, and internal destructive ophthalmitis. He also believes that, in certain cases, genuine septicæmia may be developed in the course of these complications. He thinks there is marked relative difference in the susceptibility of different constitutions to the systemic poisoning of gonorrhœal infection, as in other diseases. That the absorption and infection of the system from this cause is only in exceptional cases. The writer lays stress on gonorrhœal ureteritis following cystitis, as a part of the action of the gonorrhœal infection in its travels over the mucous surface of the genito-urinary organs towards its fatal destination in this direction, the kidneys. This complication is accompanied with pain, at times sharp and paroxysmal, usually dull and aching in character. These sharp paroxysms of pain extend upward to the kidney, and not downward toward the bladder, as in nephritic colic. Then again, there is soreness in the entire line of the ureter, increased on pressure, so that the course of the canal may be marked out clearly. Ureteritis is always established before nephritis begins in gonorrhœal infection.

The cases cited by Dr. Brown indicate that a state of pyemia or septicæmia may be developed by systemic infection from gonorrhœa in certain cases.

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Leading Articles.

PENTAL AS AN ANÆSTHETIC IN SURGERY.

At the last meeting of the Society of German Naturalists and Scientists, held at Halle, Dr. Holländer demonstrated the value of pental as a dental anæsthetic. It was suggested that these short periods of anæsthesia might also be made use of in surgical procedures which occupy but a few moments.

The paper of Holländer stimulated Dr. V. von Rogner to test in the Royal Hospital of Wieden, in Vienna, the merits of pental in surgical practice. He used it principally in the public ambulance service, or in other words, in emergency cases, and his article has been ably discussed in the *Medicinische Neuigkeiten.* Before giving the results and comments on Rogner's work, a few words relative to the substance itself will be apropos.

It was in 1887 that von Mering resurrected the anæsthetic amylen. This substance, on account of its quintuple contents of carbon in its molecule, has been renamed Pental (C_5 H_{10}). Pental is an extremely volatile fluid, having an odor somewhat similar to that of benzine. It is perfectly clear, limpid, of a cool, sweetish but ultimately of an astringent taste. Locally applied it is an irritant. It is inflammable, and burns with a yellow and very sooty flame. It is insoluble in water, but easily miscible with chloroform, ether and alcohol. It does not undergo any change if exposed to the light. Its specific gravity varies between 0.6788 and 0.6383 at a temperature of 36.8° C., and its boiling point varies between 35° and 38° C.

The preparation of the patient for pental anæsthesis is the same as for chloroform. For the administration of the anæsthetic, Rogner uses an Esmarch's mask, the inner side of which is additionally furnished with a layer of cotton about the thickness of the finger. For each admin-

istration of the drug fresh cotton should be used in the mask. Pental, at present, can only be purchased in bottles containing 15 grammes, which constitute a single dose. The bottle should not be opened before immediate use and then the entire contents should be poured upon the mask. After the mask has been put over the patient's nose and mouth, the anæsthetizer's hand holding the mask, the mask and face of the patient should be covered with a compress to hinder the too rapid evaporation of the pental. The degree of anæsthesia can be determined as in the case of chloroform. The operation can be begun within 60 or 70 seconds after the application of the drug. Certain points regarding the successful administration of pental require some experience and dexterity to be obtained. In all cases, it is stated, anæsthesia supervened without any period of excitement whatever. In a majority of cases the conjunctival reflex is retained, but its presence, we are told, need not indicate that there is not sufficient anæsthesia. All unpleasant symptoms are absent and the anæsthesia occurs gradually and quietly. The pulse is apt to be rapid at first, but becomes regular and slow during the anæsthesia. There are, it is stated, no deleterious effects on the heart or respiration, nor were vomiting, headache or other untoward effects noticed. The return of consciousness usually begins in about four minutes, and then is rapid, although quiet. Even at this stage there is a considerable lack of sensibility, which will be found valuable during the application of dressings, bandages, etc. In all cases in seven minutes after the application of the mask the return to complete consciousness and well-being was complete.

Pental anæsthesia, while accompanied by a loss of sensibility to pain, is not always attended by entire absence of consciousness, especially in the first stages, although all will-power is entirely gone. It is to be regretted that we have no data from the physiological laboratory to show just how this new substance acts upon the organism, and it is to be hoped that such will be obtained before much more of this injudicious experimentation on the human subject is pursued. The composition of pental is not such as would lead us to believe that it is one of the eminently dangerous anæsthetics, but these substances as a class demand the most thorough study of their physiological actions and the most solicitous care in their administration. One death has already been reported from its use.

ORAL DEFÆCATION.

Under the heading of "Collectanea Medica" our esteemed German contemporary, the *Deutsche Medizinal Zeitung*, occasionally interests its readers with a number of medical oddities, which frequently are of extraordinary interest. The issue before us tells us of a defæcation by the mouth, which was recently reported to the Paris Hospital Medical Society by D. Desnos.

The patient was an epileptic, who shortly after his admission to one of the Paris hospitals had an epileptic convulsion during which it was noticed that the bed linen was soiled by an ill-smelling fluid which in odor and color was like fæces. Upon being questioned the patient acknowledged that for the past two years he had been defæcating per os. He was watched and about six o'clock the same evening, an hour after his supper, the patient was seen to evacuate fæcal masses through the mouth. In time it was noticed that this was his regular habit.

The abnormal mode of defæcation was accomplished in two different ways. At times the patient when feeling need would ask for a vessel, at once quietly and with only a slight vomiting effort evacuate the fæcal masses. At other times the evacuations would be accompanied by a slight convulsion, during which the patient

would press his hand to his back in the region of the œsophagus, stating that he experienced a severe pain at this point.

The fæcal masses evacuated would completely fill a spit-cup. They were formed, varying slightly in consistence on different days, and to all appearances had come from the large intestine after having undergone the digestive process of the small intestines. The odor was that of normal fæces, and not the fearful fetor of fæcal vomiting occuring in cases of strangulation of the bowel. Upon examination they were found not to contain a vestige of nourishment, although evacuated one hour after the patient's meal time.

A few hours after defæcation the patient's abdomen would become tense, hard and somewhat enlarged, and he would point out a region of dullness in the lower portion of the abdomen which disappeared after the oral defæcation. The patient dates the cause of these extraordinary evacuations two years back, at which time he fell from a wall, striking upon a twig, which inflicted a perforated wound at the upper and inner part of the right iliac fossa. For a long time afterwards he experienced severe pain at this point. The only feasible explanation for the phenomenon seems to be that this wound established a communication between the large intestine and the upper portion of the small intestine.

Instances of oral defæcation have occasionally been reported as occurring in hysterical cases, but these may be explained by a spasmodic contraction of the large intestine, and only occurs occasionally and not habitually as in the case reported. It is doubtful if there is another case like this in medical literature.

A CORRECTION.

The Communication on Cephalhæmatoma With Report of Case in the issue of May 7th is by Dr. O. D. Walker, not by O. W. Wilson. The error occurred in making the type-written copy of the paper.

Book Reviews.

SURGICAL DISEASES OF THE OVARIES AND FALLOPIAN TUBES, INCLUDING TUBAL PREGNANCY. By J. Bland Sutton, F. R C. S.. Assist. Surgeon to the Middlesex Hospital, etc. 8vo., pp. 500, with 119 engravings and 5 colored plates. Philadelphia: Lea Bros. & Co , 1892.

This monograph will prove a welcome addition to the literature of diseases of women. The author's extensive studies of specimens of diseased ovaries and Fallopian tubes, together with his investigations in comparative anatomy and pathology make him specially well qualified to write a work of this kind. The present volume considers symptomatology and treatment as well as the pathology, but without doubt it will be prized chiefly as a contribution to pathology.

Part I. comprises 222 pages, and treats of diseases of the ovaries. Very little that is new is presented. The author elaborates a new theory concerning what have been called tubo-ovarian cysts. He differentiates a class which he styles ovarian hydrocele. The claim is made that it is only ovarian hydroceles which intermit, that is, which discharge at times their contents in the uterus—the *hydrops tubæ profluens* of the older authors. This theory being novel will require careful investigation.

Part II. containes 84 pages devoted to diseases of the Fallopian tubes. The author gives a most excellent exposition of the subject. It will be a pleasure to workers in this field to find the pathological facts involved presented to the profession in so temperate and convincing a manner. Gynæcologists have had hard work to convince the profession of the facts concerning diseases of the tubes, but when pathologists are convinced, as in the case of the author, the fruition of their labors is at hand.

Part III treats of tubal pregnancy, and embraces 121 pages. The author is in close agreement with Tait, both in pathology and treatment. Hæmatocele is considered as being due to ruptured ectopic gestation almost without exception. The treatment advised is abdominal section.

Part IV treats of the methods of performing operations for ovarian and tubal diseases. This section could have been omitted with advantage, as it is too con-

cise to be of special value, and adds nothing to the book.

The illustrations are unusually good, many of them being new, and the letter-press is that characteristic of the Leas.

We can recommend this book to every one interested in the pathology of the diseases of women, and believe that it really fills a "long felt want."

TRANSACTIONS OF THE AMERICAN ORTHOPEDIC ASSOCIATION. Fifth session, held at Washington, D. .C. Sept. 22, 23, 24, and 25, 1891. Volume IV. Philadelphia: Published by the Association.

This volume is made up of over 400 pages, embodying lists of the officers, presidents; members, and corresponding and honorary members; minutes of the Third Annual Meeting; the Constitution and By-Laws; and 54 papers on various topics in this specialty. There are also many illustrations and discussions.

The work is highly creditable to the Association, and we regret that want of space renders it impossible to review the many valuable contributions which it contains,

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TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION FOR THE YEAR 1891. Volume VIII. Edited for the Association by E. D. Ferguson, M. D. New York City: Published by the Association, 64 Madison Avenue.

The Association is to be congratulated upon the amount and character of the work contained in the nearly 700 pages which constitute this last volume of their Transactions.

WARNER'S THERAPEUTIC REFERENCE BOOK. Philadelphia: William R. Warner & Co. 1892.

This little book, which has reached its fourth year of publication, is of a convenient pocket size and contains much matter of value to the practising physician. We find articles such as, aid in memorizing doses, treatment of asphyxia, time of incubation of eruptive fevers, digestibility of foods, pharmaceutical formulæ, medical formulary, periods of gestation, hypodermic medication, incompatibles, parvules, pills, poisons and antidotes, posogoloical table, prescription writing, and weights and measures.

Periscope.

THERAPEUTICS.

THE TREATMENT OF SYPHILITIC SUBJECTS WHO ARE PREDISPOSED TO DISEASES OF THE NERVOUS SYSTEM.

In the *Gazette hebdomadaire de Médecine et Chirurgie*, 1891, No. 51, p. 606, appear the essential facts of a paper by Dr. Alfred Fournier, which was presented before the French Society of Dermatology and Syphilography. Taking up the question of the possibility of mercury being the cause of tabes in syphilitics, he disposes of this question by citing indisputable facts which show the impossibility that this can be the case, believing that those are predisposed to syphilis of the nervous system who suffer from nervous exhaustion (intellectual, moral or physical), and who are of a nervous heredity. He suggests the bromides to subdue nervous excitability, and hydro-therapy as a preventive. In the actual treatment by mercury and the iodides, in cerebral syphilis, some brilliant results; in medullary syphilis, failures in greater number than successes; in tabes, in early stage, complete cure—later, eventual possibility of cure or holding the disease in check; if ataxia is confirmed, absolute powerlessness; finally, in general paralysis, in his experience, failure. He believes that greater success will be obtained in the prevention than in the cure of nervous diseases of syphilitic origin.

SULPHATE OF CINCHONIDINE IN THE TREATMENT OF VARIOUS TYPES OF MALARIAL POISONING.

In the *Bulletin Général de Thérapeutique* for December 30, 1981, there appears a paper on the above subject, the author being Gemayel.

After detailing a number of cases in which he employed this alkaloid of cinchona in preference to quinine, he reaches the conclusion that cinchonidine is equal in rapidity of action and efficiency to quinine, if not superior to it, producing in all the cases to which he has given it brilliant results. He has found it particularly useful and advantageous in those fevers which have resisted quinine. Neither does he believe it to have the contra-

indications which often exist against the use of the older alkaloids. He orders one and a half drachms of sulphate of cinchonidine, divided into four powders, and that one of these shall be taken the first, second, fourth, and the sixth day. On the third and fifth day the treatment is suspended. In the course of the following week the same treatment is repeated. By this means he endeavors to prevent a return of the disease, which, of course, is very important. The time which is best for the administration of the drug is just before going to bed. In this way the inconvenience of buzzing in the ears or other disagreeable symptoms, such as nausea, are escaped. However, if the attacks are severe, it is well to give the cinchonidine at other times. It is hardly necessary to add that arsenic, iron and hydrotherapy are useful adjuncts to cinchonidine in the treatment of chronic malaria.

THIOL IN SKIN DISEASES

Buzzi's (*Charité Annalen*, 1891, Band xv.) experiments in Professor Schweninger's clinic in Berlin lead him to regard thiol as superior to ichthyol. It is valuable in many diseases of the skin, and possesses the following advantages over ichthyol: it is clean and never irritates, whereas ichthyol is impure and often irritates; ichthyol smells disagreeably, thiol does not; ichthyol spots the linen, thiol does not. It moreover has the advantage of costing only one-half as much as ichthyol.

INJECTIONS OF INFUSION OF NERVOUS TISSUE IN NEURASTHENIA.

Const. Paul (*Bull. de l' Acad. de Mèd.*, No. 7, February 16th, 1892) describes the effects of injections of a glycerine extract of the grey matter of sheep's brain. His experiments were continued for more than a year. The material employed was made by macerating the grey matter of sheep's brain for twenty-four hours in five times its weight of glycerine, afterwards diluting with an equal quantity of water and filtering through porcelain under great pressure. With this material, injections (from 2 to 5 c. c.) are made into the loose cellular tissue of the dorso-lumbar region. They were perfectly well borne, and gave rise to practically no inconvenience. Detailed reports of eleven cases are given. They may be classified as follows: 3 of chloro-anæmia with neurasthenia, 3 of simple neurasthenia, 1 of abnormally slow pulse, 4 of ataxy or tabes. M. Paul's conclusions are as follows: The patients feel first increased strength and improved spirits; the amyosthenia and muscular impotence diminish rapidly, exercise being taken without fatigue; pains in the back and spinal hyperæsthesia disappear after a few injections; even in ataxy the "lightning pains" cease; neurasthenic headache and insomnia also vanish, and there is increased cerebral activity. The patients feel their appetite improved, gain in weight, and lose any symptoms of dyspepsia which may have been present. In the case of chlorosis the use of iron was with advantage combined with the injections. The author thinks that in the new treatment we have a true "neurosthenic" tonic—to borrow an expression of Trousseau. In neurasthenia, although the patient may eat well, he is incapable of converting his food into force which can be employed as desired. The injection of nervous tissue allows of this utilization of food and of its being stored up in the form of potential force. In the cases quoted nervous force is developed first, allowing greater mental activity. Increase in weight and enrichment of the blood follow later but none the less surely. The author has recently commenced observations on a saline extract of grey matter in place of the glycerine extract above mentioned, but the results are not ripe for publication.—*Brit. Med. Jour.*

TRIONAL AND TERTONAL IN MENTAL DISEASES.

Kast and Baumann, in their work upon the relationship between the chemical constitution and physiological action of certain sulphones, concluded that the hypnotic energy of these bodies would be increased in proportion to the number of contained ethyl groups; thus trional (diethylsulphonmethylethylmethane) would be more active than sulphonal (diethylsulphondimethylmethane), and tetronal would be more powerful than either of the preceding. Barth and Rumpel tested the point, and failed to discover that the new compounds were superior to sulphonal. Schultze (*Therap. Monats.*, October, 1891)

has investigated the action of the former bodies in various forms of insanity. In maniacal conditions tetronal was always less efficient than trional, and the latter failed to cause sleep in many cases, even when the dose amounted 3 or 4 g. Restlessness was diminished by this dose. Better results were obtained by administering 2 g. night and morning. Excitement and destructive propensities were much lessened by this method; 1 g. of trional each morning was found to act well in subduing the excitement of very demented or imbecile patients. In several paranoiacs who were tortured throughout the night by their hullucinations, 1 to 3 g. of trional proved an efficient soporific. The hallucinations of one of these patients were aggravated by 2 g. of tetronal; emesis, cephalagia, and loss of appetite were also induced. In all these cases tetronal was inferior to trional. Schultze concludes that trional is a more reliable sleep producer than sulphonal or tetronal, and very rarely gives rise to unpleasant after-effects. He estimates that in uncomplicated insomnia trional will succeed in 75 per cent. of cases and tetronal in 60 per cent.—*Brit. Med. Jour.*

EXTRACT OF MALE FERN.

The physiological properties of the ethereal extract of male fern have recently been investigated by MM. Prevost and Binet, of the University of Geneva, who find that grave results seldom follow even large doses introduced into the stomach of man and warm-blooded animals, in consequence of the slowness with which the drug is absorbed, but that hypodermic, and, still more, intra-peritoneal injections, kill animals by paralyzing the heart and respiration. The most prominent symptoms are paralysis and early rigidity of the voluntary and involuntary muscles, preceded by vomiting, dyspnœa, shivering, and cold. The chief cause of death is paralysis of the heart, which is found immediately afterwards firmly contracted in systole, and incapable of responding to stimuli. The vagus does not lose its inhibitory power until just before death. A great loss of vermiform movements is observed in the intestine in the case of the rabbit, the rat, the guinea-pig, and the pigeon. When the drug is applied to the conjunctiva the sensibility of the cornea is diminished, and subsequently arrested without auy change being observed in the pupil. In cold-blooded animals the central nervous system is quickly paralyzed. There would seem to be a special action on the protoplasm which causes the muscular and other changes observed.

THE TREATMENT OF ACUTE CROUPOUS PNEUMONIA.

Dr. Marcel Boudouin, under the direction of *La Semaine Médicale*, has ascertained the various methods of treatment of this disease which are in common use in the hospitals of Paris (*Ibid.*, pp. 222, 223). M. Cornil, seeming to regret that venesection is obsolete, at the outset directs wet cupping, blistering, alcoholic stimulation, and Dover's powder to favor perspiration. M. Dujardin-Beaumetz uses caffeine in preference to alcohol, recommending also kola; for nervous manifestations, chloral, or, in alcoholic subjects, paraldehyde, blistering only when the signs are persistent. M. Peters treats his pneumonias according to their condition: wet cups in early cases, tartrate of ammonium frequently, but according as they are robust, debilitated (with alcohol), or bilious. M. Bucquoy believes in bleeding and tartar emetic, sulphate of quinine, and blisters. M. Rigal has practised intra-pulmonary injections of antiseptic substances (sublimate, etc.), also administers sulphate of quinine and uses cold baths. M. Moizard, in adynamic forms, injects ether or caffeine, and even sparteine. M. Oulmont uses these remedies with small doses of digitalis. M. Huchard uses ether, camphor, or digitalis, and avoids all depressing remedies, as antimony.

THE SULPHATE OF DUBOISIA IN MENTAL DISEASES.

Preiniger has used the sulphate of duboisia as a culmative and hypnotic in mental affections with good results. The action of this agent much resembles that of hyoscine, while its inconveniences, when given in too strong a dose are the same. When administered to an insane patient, sleep sets in, in from ten to twenty minutes, and lasts from one to eight hours. Sometimes the sleep is of short duration, yet, on awakening there persists a somnolent condition and prostration which more or

less takes its place. If the dose be larger than two and a half to three mgrms., the patients become agitated, the extremities jerk, the pulse becomes accelerated, the respiration increases in frequency, and the temperature rises — even hallucinations may set in. The peculiar idiosyncrasies of patients with regard to occustecination and its intensity of action should be borne in mind. The maximum dose for subcutaneous use, and which should not be increased, is two mgrms.—Administered by the mouth it sometimes does not act.—*Le Bulletin Médical,* No. 88, 1891.

THE TREATMENT OF CYSTITIS.

In an article upon cystitis in the *Atlanta Med. and Sur. Jour.*, March, 1892, Dr. Murphey, of Atlanta, writes:—In the treatment of cystitis, the measure of the first and greatest importance is absolute rest. The rest should be in bed, with hips slightly raised, in order that pressure may be taken off the neck of the bladder. Constitutional treatment consists in regulating the character of the urine, so that it shall be unirritating to the diseased bladder.

To render the urine less irritating give alkaline diuretics, demulcent drinks, etc. Citrate of potash is one of the most valuable alkaline diuretics and is often advantageously combined with buchu, uva ursi, triticum repens.

Opium should be used to allay pain, lessen excitability and relieve spasmodic action. I usually prefer suppositories of opium and belladonna, but if the spasm alone is causing the pain belladonna alone will relieve it, which is preferable. Poultices over the hypogastrium and perineum or hip-baths are useful. The bowels should be kept regular and free in order to secure free action of the portal circulation and prevent straining at stool. Free action of the skin and bowels relieves the taxed kidneys and bladder, giving them less to do. Saline purgatives are better suited for this purpose. Sulphate of magnesia or a glass of a laxative mineral water before breakfast usually acts nicely. Digestion should be watched with care; in fact, I have found cases that could not be relieved until the state of the digestion was improved.

The diet is an important factor that should not be overlooked; irritating articles of food should not be allowed, spirits, alcohol in all forms must not be allowed; coffee and tea should not be allowed. Nothing should be taken that disagrees in the least with digestion.

In a mild case of cystitis, I do not adhere strictly to all of the rules laid down here, but let the patient continue at business if desired, and by proper care and treatment he may be relieved in a short time. For example, the urine is too acid or too alkaline; acts sometimes like a foreign body; it irritates, and the bladder will make efforts to expel it. Deposits of any urinary solids in the viscus are likely to produce an irritable condition. Such cases being of a mild form can readily be relieved if not allowed to stand too long.

In advanced stages of cystitis local treatment can be employed advantageously, by washing out the bladder carefully with medicated injections.

MEDICINE.

ATAXIC PARAMYOTONIA.

Gowers (*Centralbl. f. Nervenheilk. u. Psychiatrie*, February, 1892, p. 41) has reported the case of a man forty-one years old, with a history of syphilis of eleven years' standing, in whom for a year and a half an abnormal tonic condition of the muscles, first in the lower, then in the upper extremities, had existed. The patient was well nourished; the extremities were large and the muscles well developed and hard. This hardness was dependent upon tonic spasm that interfered with voluntary movement, rendering it slow and difficult. There was no special rigidity; extensors and flexors were apparently involved in like degree. The spasm was not diminished by repetition of movement, but was constant and opposed passive as well as active movement. There was at the same time some muscular weakness. In the upper extremities coördination was impaired. The muscle-sense was defective, especially as to posture, size and weight. The electric irritability of the muscles was preserved. It was not possible to elicit the knee-jerk or other evidence of myotatic irritability, although the failure may have been dependent upon spasm. Tactile sensibility was lost upon

the palms of the hands, diminished on the dorsal aspect of the terminal phalanges, and on the soles of the feet. There was often a sensation as of standing upon a circular base. The sense of pain was retarded upon the palms of the hands. The temperature-sense was almost normal. There was almost complete impotence. The action of the sphincters were preserved. There was an absence of pain and of cerebral derangement. Gowers considers the affection as analogous to Thomsen's disease and dependent upon functional derangement of the gray matter of the cord, as a result of which there is increased activity of the motor nerve-cells that control normal muscular tone.—*Amer. Jour. Med. Sci.*

THOMSEN'S DISEASE.

Dr. C. L. Dana showed at a recent meeting of the New York Neurological Society a man thirty-three years of age presenting the typical phenomena of this disease. The family and personal history of the patient were good. At the age of seventeen weakness of the muscles was first noticed, and three years later the patient found that after clenching the fists he was unable to open them. The affection had gradually become greater and more extensive, until the only muscles not involved were those of the thighs and upper arms. The myotonia was most marked in the forearm and leg muscles, the tendon reflexes were only obtained with difficulty, and there was no sensory disturbance. The reaction to galvanism was slightly increased, that to faradaism normal. Dr. Dana expressed the opinion that the phenomena were confined to the muscles, and that the disease was a purely muscular one.—*Lancet.*

HEREDITARY TREMOR.

Debove, *Gaz. des Hop.* 99. 1891. (Abstract by Möbius, in *Schmidt's Jahrb.*) Charcot has lately described a hereditary form of tremor which had been previously mentioned by Fernet. Debove reports the histories of two families thus affected, in one of which it had gone through five generations. His conclusions are as follows: There is a hereditary tremor which may be transmitted in either sex, beginning in childhood and increasing in advancing years. Its rhythm is about eight or nine to the second and it disappears when the muscles are completely at rest. The outstretched hand trembles, but voluntary movements do not increase it. It may involve the limbs, the eye-lids, the lips, or the tongue, but the hand is the most affected. The fingers do not have an independent tremor. The author adds that further observations may confirm or modify his views. Prof. Möbius calls attention, in his notice of Debove's article, to the fact, that in his "Diagnostik" he had described a tremor essentialis which agreed in its symptoms and in its hereditary character with the above, but with this difference, that in his cases the tremor first appeared in mature individuals, or in those of advanced age.

ÆTIOLOGY OF ITCHING.

According to Dr. E. B. Bronson (*Medical Record*, Oct. 24, 1891), the primary cause of itching pertains to hidden molecular or dynamic changes within the sensory nervous apparatus, changes whose immediate effect has been presumed to be of the nature of a dysæsthesia, and whose only ostensible sign is the perturbed sensation. The accessory pathological causes he tabulates as follows: Predisposing causes.—A: A state of cutaneous hyperæsthesia, or excessive irritability of the cutaneous nerves. It may occur, (a) as the local expression of a general neurotic condition, congenital or acquired, in which case the simplest excitants, as friction of clothing, may evoke the sensation; or, (b) it may be due to local changes in the skin, attended with prolonged irritation of the cutaneous sensory nerves. B: A state of hypopselaphesia, *i. e.*, a state of impaired conduction in the cutaneous nerves of tactile sense. Though usually occurring as a concomitant of hyperæsthesia of the skin, it is possible that it may exist independently of the latter, as in atrophic conditions (more particularly in pruritus senilis), when, like hyperæsthesia, it may become the predisposing cause of itching. Exciting causes.—A: Irritations conveyed to the skin from the interior of the body, either as (a) reflex irritations; or as (b) irritations transmitted from nervous centres. B: Direct or local irritation, (a) from extraneous sources, *i. e.*, from such

irritants as operate upon the surface of the skin; (b) from intra-cutaneous sources, comprising (1) lesions of trophic cutaneous diseases and their products; (2) toxic materials deposited from the blood; (3) effects of local nutritive disturbances, or deranged metabolism in the cutaneous sensory nerves; (4) spastic contraction of the arrectores pilorum muscles, which, though it may not of itself suffice to cause itching, is probably often associated with other causes as a contributory factor.

FIBRO-SARCOMATOSIS.

Dr. Langenbuch recently presented at the Freie Verein der Chir., in Berlin, a patient who had had several months before about eighty fibro-sarcomata scattered over the skin's surface. An energetic treatment with iodides and arsenic had already resulted in a decrease in the tumors, when an erysipelas suddenly developed and spread over the entire surface. The consequence of this was that, within the space of five days all the sarcomata had disappeared and the skin had become normal. After the space of a year a slight recurrence had taken place, and a tumor the size of a plum was to be seen in the region of the neck.

GENERAL ATHETOSIS.

Dr. Hugh Hagan reports a patient, aged four years, who was of normal birth and healthy extraction. Was healthy up to nine months of age. Taken ill on Friday and until the following week had continued convulsive attacks marked by high temperature. Fever lasted five weeks. During convalescence the mother noticed "the child moved constantly in all its joints." Author says the child was brought to him two years after first illness. Patient is in a state of constant motion. Movements are marked by that apparent volition and rhythm so different from the jerky, spasmodic character of the choreic. The eyes, though in a more or less constant state of movement, do not present the rapid vibratory character of a true nystagmus, but are more slowly and irregularly drawn up, down, in or out, as a result of the spasms of the internal ocular muscles. The masseters and temporals close the lower jaw so as to lacerate the tongue, which is alternately protuded and retracted. At times marked opisthotonos. Cannot sit or stand unassisted. Totally ataxic aphasic, but, so far as his education will permit, probably not amnesic. The athetoid movements cease entirely during sleep. When at rest the parts assume their normal physiological positions, no evidence of contracture or contraction being present. He thinks that the condition present is due either to a cerebral tumor, or to meningeal adhesions over the motor cortical region, and sees no reason why this condition could not produce the symptoms as well as those generally found.—*New York Med. Jour.*, Jan. 16, 1891.

HISTOLOGICAL ALTERATIONS OF THE NERVOUS CENTRES PRODUCED BY ELECTRICAL SHOCK.

Magini, of Rome, experimented upon dogs, cats, pigeons, white mice and rabbits, employing the potential electrical apparatus of Winsurth. After examining the brain cord and peripheral nerve carefully he arrived at the following conclusions:

1. That death by electrial shock, where there is no external or appreciable internal lesion, is produced by a profound alteration taking place in the ganglion cells of the cerebro-spinal system.

2. That such ganglion cells show great changes in size, being shrivelled and atrophied, deprived of nucleus and nucleolus, and accept an intense stain.

3. That the electrical shock, oft repeated, favors diapedesis.

"GONORRHŒAL CYSTITIS."

Du Mesnil (*Virchow's Archiv*, vol. cxxvi, 1891, Part III) denies that there is such a thing as specific gonorrhœal cystitis. When gonococci are found in the urine, they have, in all probability, entered with urethral pus, and are not new products developed from the true specific inflammation of the vesical mucous membrane itself. In women pus from the urethra or vagina might easily get into the bladder in this manner. Du Mesnil maintains, on the strength of fresh researches, that gonococci cannot alter the composition of the urine, and that cystitis with ammoniacal urine is not produced by these germs. Indeed, the urine renders the gonococci harmless or kills them entirely.—*Brit. Med. Jour.*

GLYCOSURIA AND LOCOMOTOR ATAXIA.

Guinon and Souques call attention to the fact (*Arch. de Neurologie*, Nov., 1891,) that tabes may have crises in which sugar is found in the urine, and that in the family of ataxics may be found glycosurics. DeWolf points out (*American Lancet*, Vol. VII.) that during the paretic apoplectiform attacks, and after locomotor ataxia gastric crises, glycosuria may occur. Kiernan states (*American Lancet*, March, 1884,) that glycosuria may be present in the urine of paretic dements after both epileptiform and apoplectiform attacks.

LEPROSY.

Looft (*Centralbl f. d. Med. Wiss.*, 1891, p. 764) has found bacilli in anæsthetic spots in four cases of pure anæsthetic leprosy, the cases representing four stages of the malady from two to seven years' duration. The portions of skin examined were excised from the periphery of the spots. In the sections from the old patches the bacilli were very few in number. In no case were bacilli found in the muscles in in which the fibrillæ had undergone fatty degeneration.—*British Med. Jour.*

SURGERY.

OUTSTANDING EARS.

Mr. William Thomas, of Birmingham, describes, in the *British Medical Journal* for October 17, 1891, the following operation by which he has succeeded in making flaring ears lie close to the head. The operation consists in the removal from the inner surface of the pinna of an elliptical piece of skin, dividing the cartilage of the pinna down the center of the exposed cartilaginous surface, and uniting the margins of skin by sutures. The widest part of the skin removed should be from one-half to three-quarters of an inch, but of course this depends on the degree of deformity. It is necessary to divide and turn back the cartilage, not only to remedy the deformity, but also to allow of easy approximation of the skin margins, and care must be taken to avoid division of the outer skin with the cartilage. The after treatment consists in the application of a small cotton-wool pad between the head and the pinna—the latter being fixed by a bandage until healing is complete. Immediate union takes place, and there is hardly any perceptible scar, the skin of the ear having great vitality. A simple method of keeping the outstanding ears back without operation is to fix them by a piece of lint soaked in collodion, and placed between the pinna and the head, the ears being bandaged close to the head until the collodion is firmly set. The adherent splint thus formed will hold the ear in position for two or three weeks, when it may be renewed. It is, however, only a temporary measure. The principles of the operation are applicable to various malformations of the pinna.—*St. Louis Med. and Surg. Journal*, January, 1892.

PENTAL IN SURGICAL PRACTICE.

V. v. Rogner (*Wiener med. Presse*, 1891, No. 51) used pental very successfully in cases where narcosis is required for a short time only. The same conditions for its use obtain as for anæsthesia from chloroform.

He used Esmarch's inhaler, covered on its inner side by a layer of wadding.

Narcosis in sixty or seventy seconds, in all cases, followed its administration, without any stage of excitement and without any injurious effect upon the heart or respiration.

At the expiration of three minutes the patient awakes quickly and quietly, but anæsthesia lasts for several minutes more.

INTRA-CRANIAL SURGERY IN ITALY.

It is cheering to witness the advance of surgery in Italy, which now bids fair to resuscitate the best traditions of Fallopio, Tagliacozzi, and Scarpa. Intra-thoracic and intra-abdominal surgery owe not a little to her recent operators, prominent among whom may be mentioned poor Count Loreta of Bologna, whose tragic end on July 23rd, 1889, as described in *The Lancet* of August 3rd following, is one of the saddest pages in the annals of the profession. His resection of the liver, and, still more, his digital divulsion of the œsophageal and pyloric orifices of the stomach, did not require the commemorative tablets in the Bologna Hospital and University to perpetuate their author's pre-eminence among his contemporaries.

His influence and teaching are still active for good in the direction which would have pleased him most—that of intracranial surgery. In Florence, the week ending March 12th has been signalised by a brilliantly successful operation in this department. Professor Baiardi, of the Spedale della Maternità there, had under his charge in the children's ward a little boy of four years and two months, suffering from "general cortical epilepsy," according to the official bulletin, "and idiocy." Having trepanned the cranium, Proffessor Bairdi (assisted by Drs. Mattucci and Giarré) removed two great tracts of bone in the parietal regions, "in correspondence with the *zona motrix* of the cerebellum." From the first day after the operation the little patient's eye, nearly always wandering, uncertain, and unconscious, "si mostrò sereno ed animato da un lampo di intelligenza" (showed itself serene and enlivened by a flash of intelligence,) the "habitual restlessness was replaced by calm," and "sleep came to restore the feeble limbs of the child, which, a prey to sickness at the threshold of life, had neither consciousness nor instinct, could neither speak, nor walk, nor indicate its bodily requirements in any way; did not even know how to masticate." The recovery, vigilantly watched and assisted, is already so far satisfactory as to warrent every confidence in the lasting success of Professor Baiardi's operation.—*Lancet.*

A NEW OPERATION FOR CONGENITAL PTOSIS.

Gillet de Grandmont (*Rec. d'opthal.*, April, 1891) describes his operation as follows: (1) After having seized the upper lid with a Snellen's forceps, the skin is cut through parallel to the free border of the lid, the incision being three or four millimetres from the border and about two centimetres and a half long. (2) Raise up the two cutaneous flaps and detach and excise the corresponding portion of the orbicular muscle, so as to expose the entire tarsus from the ciliary border to and including Sappey's orbito-palpebral muscle or tendon of the levator palpebræ. (3) Cut through the entire thickness of the tarsus, for an extent of two centimetres, parallel to the free border of the lid, and from two to four millimetres from it. (4) Describe a curvilinear incision, with cavity downward, extending from one end of the first incision of the tarsus to the other. This incision should extend through all the tissues of the lid, including the conjunctiva. (5) The upper or orbito-palpebral flap should then be stitched to the lower or tarsal flap by three sutures without touching the skin.

SURGICAL TREATMENT OF GRANULAR CONJUNCTIVITIS.

For those cases of granular lids which are not benefited by the ordinary antiseptic caustic treatment, the following method is recommended by Darien, (*Archives d'Ophthalmologie*,) and has been successfully carried out for more than a year.

All the cases, numbering 130, were much improved, and the great majority quite cured.

The patient being anæsthetised, the lids are thoroughly everted and the palpebral fissure split, if necessary. Every granulation is incised and then scraped out with a small sharp spoon. The lids are thoroughly scrubbed with a brush of short, hard bristles, and a 1:500 sublimate solution is well rubbed in with absorbent wool.

Iced compresses are applied for the first day. The lids must be everted, any adhesions separated, and the eyes bathed with a strong sublimate lotion every day. In about a fortnight the conjunctiva will be smooth and healed, but the patient must be kept under observation for a month longer to guard against a relapse.

SILKWORM-GUT IN SURGERY.

Bianchi (*Reforma med.*, 1891, May 1) says; Silkworm-gut, *crin de Florence* of the French, is not the bowel of the silkworm, but the worm's silk producing gland with its contents. To render the material aseptic, Bianchi places it in a 5-100 solution of carbolic acid, then boils it for one hour in a 3-100 solution of boric acid, and preserves it in a 1-1000 solution of sublimate. He has used the gut very extensively and claims it to be preferable to silk and catgut, as it does not absorb the secretions, and is suitable for plastic operations as well as for suturing of nerves and bones. A thread eighteen to twenty cms. long can sustain twenty to twenty-three kilograms. Bianchi used the silk-

worm-gut in the following operations among others: In two resections of the knee, two osteo-plastic operations by Pirogoff's method. One Ogston's astragalo-navicular resection, one fracture of the patella, per valgus, and in compound fracture of the bones of the forearm and the humerus, etc.

RADICAL TREATMENT OF NASAL POLYPI.

Casselberry (*N. Y. Med. Jour.*, Nov. 14th, 1891), in order to gain access to myxomatous polypi in the nose, recommends the reduction of hypertrophied turbinated structures by the electro-cautery; the removal of septal excrescencies by the saw, chisel, or drill; and the correction of septal deflections. For removal of polpi he recommends the snare, supplemented by occasional use of the forceps. After removal of the growths, the so-called roots are to be thoroughly cauterised by means of the galvanic cautery. A fine electrode, slightly curved, may be insinuated beneath the middle turbinated body to the region of the hiatus semilunaris, from the edges of which polypi are known to spring very frequently. By these means the majority of cases can be permanently cured. Nevertheless, there are certain cases which Casselberry maintains can only be cured by removal of the antero-inferior and of the middle turbinated body. These are the cases where, owing to narrowness of the superior nasal zone, or enlargement or malformation of the middle turbinated body, there is an impediment to proper access to the diseased parts, and the space is insufficient to insert an electrode to the region of the hiatus semilunaris. He considers properly constructed turbinated bone scissors the easiest and best means of removal in most cases. Where, however, there is not space on each side of the body to permit the passage of the blades sufficiently high up, he uses a wire snare *écraseur* for removal of the part.—*Brit. Med. Jour.*

FISSURA ANI.

In a paper which recently appeared in the *Southern Medical Record*, Dr. Willis F. Westmoreland, says: I wish to speak now with reference to operations for fissure in ano. A great many physicians recommended the use of speculums for stretching the muscle; while other operators advise you to take a knife and nick the muscle before you stretch it. In olden times surgeons introduced their hands into the rectum, closed their fist and then pulled it out, stretching the muscle in that way. In the use of these different methods you cannot tell how far you stretch the muscle. I have never seen patients lose control of the sphincter as a result of this operation where the fingers or thumb had been used as a method of operation. Incontinence of the fæces occurs in those cases where the muscle has been cut, stretched with speculum, or where some of the old methods have been used. My plan is to put the patient under the influence of an anæsthetic. I stretch the sphincter; I feel the contracted parts of it have given way while my patient is under the influence of an anæsthetic; take my finger out, and then if there is not any contraction of the muscle—none at all—I let it alone. If the spincter contracts, it shows that the contracted part is not thoroughly broken up, and I stretch it more while the patient is still under the influence of the anæsthetic.

A CASE OF DEPRESSED FRACTURE ON THE LEFT SIDE OF THE SKULL, WITH SYMPTOMS; TREPHINING; RECOVERY.

Cheyne, (*Lancet*, 1891, ii., 813.) gives the following history: F. V., a boy aged four years, was brought to the hospital on August 23, 1888. Three days previously he fell from a balcony fifteen feet high, on to a stone floor. When picked up he was unconscious and severely bruised about the left side of the head, and there was a lacerated wound above the left eyebrow. He regained consciousness in about seven minutes, complained of severe pain in the head and soon became very sick. The sickness and vomiting continued until the day before admission, and was accompanied by restlessness, fever and pain in the head. On the morning of admission he seemed duller, and there was twitching of the eyes and hands. The boy seemed dull and stupid. The right eye was widely open, and the left upper lid slightly drooping. The right pupil was dilated and reacted imperfectly to light; the left was normal in size and reaction. There were no signs of facial or other paralysis. While he was in the out-pa-

tient room distinct twitching came on in the left side of the body; the face, hand and arm being more affected than the leg. At intervals this spread to the right arm and leg. This condition continued until the operation (two-and-a-half hours later), the twitching at times being very severe, and during the whole of this time the boy was quite unconscious.

On examination there was found a depressed fracture of the frontal bone, just above the outer side of the left orbital process, from which a fissure ran vertically upwards for an inch and a half. Trephining was done and the depressed bone elevated or removed. After the operation the boy slept well and was quite conscious on awakening. There was no recurrence of the twitching, but the left arm and leg were paralyzed as regards motion. This paralysis passed off entirely in a few days, and the boy made a rapid recovery.

OBSTETRICS.

RUPTURE OF THE UTERUS AT THE BEGINNING OF LABOR.

Cercha (Przeglad Lekarski, abstract in *Repertoire Universel d'Obstetrique*, 1892) reports the following case: 4-para at term. Suddenly on March 1st, great pain on right side of abdomen, low down. The pain soon disappeared. On examination the cervical canal was slightly patulous; the head movable above the pelvic entrance, the membranes intact. For three days there was no more pain; on the fourth day, repeated chills, fever, meteorismus, restlessness, collapse. There was œdema of the vulva. The distention of the abdomen was so great that one could distinguish nothing in it. The fœtal heart sounds could not be heard. On internal examination hydrocephalus of the fœtus was discovered. At first an attempt was made to perforate the head, but on account of its free motion this could not be done. [Why not fix with vulsellum?] Podalic version was then tried, but did not succeed. Finally the os was dilated with hydrostatic pressure sufficient to allow full access to the head, when perforation was done, and a one-half litre of fluid ran out. It was impossible to extract without a cranioclast, for the cranial bones were disarticulated, so podalic version was done. In endeavoring to extract the placenta it was found in the abdominal cavity, having escaped through a rent in the right wall of the uterus; there was considerable hæmorrhage. No injection was given. The wound was tamponed with iodoform gauze, after replacing the prolapsed intestines. The woman recovered, but had fever for six weeks. There remained a small vesico-vaginal fistula. The author quotes the similar cases of Hoffman and Simson.—*Univ. Med. Mag.*

LARGE HÆMATOMA AFTER LABOR.

C. Braun (*Centralbl f. Gynäk*, No. 10, 1892) exhibited before the Vienna Obstetrical Society last February a case in which an enormous hæmatoma developed on the third day after labor. The patient was a 3-para, aged 26. She was admitted into hospital twenty-five hours after rupture of the membranes. Then decapitation was necessary, as the presentation was transverse and had been mismanaged. The head was delivered with forceps. The cervix and vagina were plugged on account of laceration of the cervix and vestibule, which could not be controlled by ligature. In three days the hæmatoma developed; it arose in the left broad ligament, and extended upwards nearly as far as the right hypochondrium. The temperature was then normal, the pulse rose to 130, and the respiration to 60. The patient was kept in bed and ice bags were applied to the abdomen. Sixteen days later the hæmatoma and general symptoms appeared unaltered. After that date recovery was rapid, and when the case was exhibited no trace of the disease remained save a small, irregular, resistant mass in the neighborhood of the iliac fossa, quite free from tenderness.—*Brit. Med. Jour.*

TUBAL ABORTION; INTRA-PERITONEAL BLEEDING; LAPAROTOMY; RECOVERY.

Jahreiss reports in the *Münchener medicinische Wochenschrift*, 1892, No. 9, the case of a woman who had borne two children, who complained of profuse irregular bleeding persisting for two months, and occurring about every two weeks. Pain was also present, the patient stating that menstruation had been profuse since the death of her last child, when a midwife

had delivered an inherent placenta. An examination revealed the uterus nearly normal; the right fallopian tube showed dilatation. The left tube was normal. The patient was put at rest, given fluid extract of hydrastis, and an ice-bag placed upon the abdomen. This treatment failed to relieve the pain or check the hæmorrhage, and finally, a slight elevation of temperature, with a rise of pulse to 120 was observed. The symptoms were those of rupture of a tubal sac, although collapse, subnormal temperature, and profound anæmia were absent. Upon opening the abdomen blood was found in the pelvis, and tubal abortion upon the right side was discovered. The patient recovered without complications. The right tube and ovary were removed, and the abdomen cleansed. On examining the tube clotted blood was found in it, but the ovum could not be distinguished. Rupture had occurred, although the orifice of the rupture was partly closed by the clot.—*Amer Jour. Med. Sci.*

HYDATIDIFORM-MOLE PREGNANCY.

Engel (*Centralbl. f. Gynäk.*, 1892, No. 1) has examined five cases of molar pregnancy which were observed in the course of 4,000 labor patients under his observation. These cases occured in a woman aged 22, a 2-para; a second, aged 26, a 3-para; a third, aged 28, a 4-para, a fourth, aged 32, a 9-para; and a fifth, aged 46, who was the mother of no fewer than twenty children. The fœtus could not be found in any of these cases. The most characteristic symptom was hæmorrhage, which began about the third month and lasted for weeks or even months, in the course of which period the uterus steadily increased in size. At first the blood was very serous and almost colorless. Later, old and recent clot came away. Another characteristic train of symptoms consisted in nausea, headaches, pallor, palpitations, and other phenomena, due to internal hæmorrhage. The uterine walls were always thin, the cervix participating in the morbid change. Hence, sharp instruments are out of the question. Ergot should be given, the vagina carefully plugged, and ultimately the cervix must be cautiously dilated with compressed sponges, the uterus being emptied by the hand.—*Brit. Med. Jour.*

FORCEPS AS AN AID TO VERSION.

Dr. W. Henry Harris, writes in the *Lancet*:—A case I was called to at a long distance, by two medical men in attendance, in Manitoba, may not be without interest. On arrival, I found the patient, aged twenty, in labor, then some twenty hours; primipara; seven months. On examination I found the right arm protuding (had been so some hours, the patient having been kept under chloroform,) the right shoulder firmly jammed, and constant powerful uterine contractions, so that the introduction of the hand for version seemed impossible. It occurred to me that if I could apply the forceps (Simpson's long) on the thorax at a point a little below its greatest diameter, gentle pressure would cause the blades to descend toward the pelvis, and so convert the presentation into an ordinary breech. The result was as I anticipated. In this case the fœtus had been dead some hours and the labor premature. My reason for publishing this case in *The Lancet* is that I do not see "forceps as a means of version" quoted in the text-books, as well as to suggest that similar means might be applicable in cases where such unfortunate presentation has occurred.

GYNECOLOGY.

ILEO-COLOSTOMY.

Gross, of Nancy (*Sem. Méd.*, February 13, 1892) discusses the indications for ileo-colostomy in cases of ulceration and tumor of the cæcum. Maisonneuve, it is stated, was the first surgeon to aim at intestinal anastomosis in a case of internal strangulation, in which he stitched the small intestine to the cæcum in order to avoid the necessity of forming an artificial anus. This operation, which was performed in 1854, was followed soon after by a second, in which an attempt was made to relieve the patient by an artificial anus. Both these cases terminated fatally, death having been due in one case to peritonitis, in the other to suppurative perityphlitis. Although ileo-colostomy has not been frequently performed, much attention has been given to this operation, especially by German surgeons, and its methods have been improved by Salzer and Hochenegg. In the procedure advocated and successfully practised by the latter

surgeon, the two ends of diseased portion of gut, which has been completely separated from the rest of the intestinal tract, are fixed to the edges of the external wound in order to permit the discharge of mucous and purulent secretion. Ileo-colostomy is held to be indicated under the following conditions: (1) In cases of tumor—particularly carcinoma—of the cæcum not amenable to direct operation. In cases in which the diseased portion of intestine is constricted, ileo-colostomy will relieve the patient of the symptoms of obstruction. If such symptoms have not yet been manifested, the operation will have a prophylactic effect. Moreover, by removing the irritation caused by frequent contact of fæcal matter the tumor will be less disturbed, the bad results of fæcal retention will be avoided, and secondary pericæcal inflammation will be diminished if not altogether abolished. (2) Chronic or relapsing inflammatory affections of the cæcum, with ulceration and consecutive constriction and adhesion to surrounding structures; ulceration of tuberculous or other organs with pericæcal suppuration and stercoral fistulæ. Free passage of fæces along the intestinal canal will necessarily result in suppression of the discharge of fæcal fluid by the fistulæ, and so render it possible for these to close and cicatrize. Moreover, as the seat of the disease is no longer infected by fæcal matter, the inflammatory phenomena ought to diminish in intensity, if they do not wholly disappear. Ileo-colostomy, however, as practised by Hochenegg, is a long, delicate and complicated operation, and it ought not, therefore, to be undertaken except under very favorable conditions, and when the general health of the patient is relatively satisfactory.—*Brit. Med. Jour.*

OVARIOTOMY IN A PATIENT IN HER EIGHTY-SECOND YEAR.

At a meeting of the British Gynæcological Society on March 24th, I recorded the particulars of an operation for ovarian tumor in a patient over 81 years of age, who recovered perfectly, of which some details may be interesting. The peritoneal cavity was filled with a clear yellowish-colored jelly-like fluid. The cyst, which was multilocular, extended up above the umbilicus. The main cyst contained thick colloid material, which had to be scooped out with the hand. The peritoneal cavity was irrigated with warm water, and a drainage tube inserted. Convalescence was somewhat tedious, but satisfactory. The patient is now (April) quite well, and able to walk round her garden, Dr. Joyce, of Cranbrook, informs me. In Mr. Bland Sutton's table of twenty-two cases of ovariotomy in patients over 70, the oldest was only 80. This case, therefore, is the oldest yet recorded.—Arthur W. Edis, M. D. in *Brit. Med. Jour.*

PYOKTANIN INJECTIONS IN CARCINOMA OF UTERUS.

Boldt (*Merck's Bulletin* for January, 1892) says: Pyoktanin possesses great germ-destroying power, and is devoid of injurious effects on the animal economy if used with proper precautions. He quotes a case, Backmaier (*Wiener med. Presse*, 1891), where there had been hæmorrhage from the vagina for more than three months, uterus immovable, with parametric-infiltration involving anterior vaginal wall.

The injection, one-and-a-half to three syringefuls of a one-to-one hundred solution in different portions of the growth every second day for four months, resulted in disappearance of the anæmia; the ulcerated surface was even and covered with healthy granulations; the discharge was scanty and not bloody or ichorous; the infiltration had diminished, and the ulcer on vaginal wall was partially healed.

Four months subsequent to this improvement was steadily progressive.

Boldt also gave reports of four cases of his own. The women were from forty-two to fifty-three years of age and all had been bleeding irregularly from two to three months. They were emaciated, having intense pelvic pain—the anterior vaginal walls were more or less infiltrated; the vaginal portion of the cervix of all was nearly destroyed, and other recognized diagnostic evidences of malignancy was present. The treatment was through curetting; followed by a tampon of dry iodoform gauze. In one case the Paquelin cautery was required to stay hæmorrhage. After forty-eight hours gauze was removed, patient placed in Sims' position, parts dried and injection again used, care being taken to reach the deeper structures, with effort to keep the parts as thoroughly clean as possible, this treatment, with some mod-

ifications, is continued. The injection usually causes pain for half an hour.

Confident views are expressed that proper treatment by this drug will prolong life and alleviate suffering, and in some cases, perhaps, complete a cure, when the disease does not admit of radical surgical treatment. The hypodermic use of pyoktanin should not exceed grs. iiss. Hoge, in *Virg. Med. Monthly*, October, 1880, reports a case of failure, but Boldt alleges the remedy was used insufficiently, or that the solution might have been unstable.

PEDIATRICS.

OVARIAN CYSTS IN INFANTS.

Kissel (*Nouv. Arch. d'Obstét. et de Gynèc.*, October, 1891. Supplement, p. 458) found 30 cystic ovaries in 428 bodies of female children (362 from birth to 1 year old, the remainder from 1 to 13 years old.) In only one case of cystic ovary was the subject over 1 year, and that case was 13 months old. The younger the infant the higher up lay the cystic ovaries, the older infants bearing the tumors in the pelvis. The cysts most usually occupied the outer aspect of the ovary. The cysts were tense, sometimes larger than the ovary, and often had septa. The ovarian parenchyma was partly destroyed by the pressure of the cyst; sometimes there were traces of parenchyma on each side of the cyst. Why these cysts were so common in infants and rare in children Kissel could not explain. He carefully searched with the microscope, but could not once find any trace of cyst or cicatrix representing the site of a cyst. These cysts, must, it would seem, undergo a retrograde change, and, thanks to the youth of the patient, the parenchyma is probably reproduced.

A TOY BALLOON IN THE TRACHEA; REMOVAL.

Dr. W. C. Glasgow (*N. Y. Med. Jour.*, 1891, liv., 460.) gives the following history: The patient, a colored child, eight years old, was seen for the first time, April 22, 1891. It was stated that two hours previous to this time the child had swallowed a toy balloon, that she had had severe choking spells, but that in the interval her breathing was normal. When brought to the clinic there seemed to be nothing the matter with her. Her breathing was perfectly quiet and normal; there was no cough; her voice was clear, and there seemed to be no interference with respiration. Suddenly, however, without any apparent cause, she began to struggle as if for air. She became quickly cyanotic, her cry was toneless, and there was frothing at the mouth. An examination of the chest showed a whistling râle over the left bronchus, with weakening of respiratory murmur. She was then chloroformed and a low tracheotomy done, but nothing could be detected even by the sound passed into the trachea. On the fifth day she had several coughing spells, with symptoms of strangulation, and during one of these attacks, a red substance was seen presenting at the tracheal wound. This was caught with a forceps, and although but gentle traction was used, the red rubber came away from its attachments, leaving the wooden tube in the trachea. This was forced upwards through the glottis and removed through the mouth. It was too large to pass through the tracheal opening. The next day surgical emphysema was seen over the whole anterior part of the chest. The left lung gave numerous mucous râles, with a distinct full respiratory murmur. The wooden part of the balloon measured an inch and three-sixteenths in length, and five-sixteenths of an inch in diameter.

THE TREATMENT OF SCARLATINA.

Since the publication of the treatment of the disease with chloral, by Dr. J. C. Wilson, in 1889, others have had some favorable experience with this drug. The theory of its action is a sedative to the nerve centres, and antiseptic to the blood and tissues with which it comes in contact in administration and elimination. It is given in doses just sufficient to keep the patient in a state of light somnolence. This will require about one-half to two grains for infants and children, and four to six grains for adults, repeated every three to four hours, according to effect. It is especially successful in preventing complications and sequelæ.

Curgenven presented before the Epidemiological Society of England his method of treatment. The remedy used is oil of eucalyptus. He gives it internally in frequent doses (two to four hours) of a few

drops in emulsion or shaken up in water. He saturates the clothing and all bedclothing, and sprinkles the floor, furniture and walls with it, until the entire air of the room is redolent with the odor. He sponges the body with it twice daily. It renders all other medication and disinfection, as well as isolation of the patient unnecessary.

His invariable results, after one year's experience, are the immediate arrest of the eruption, which does not extend further, the speedy relief of angina and subsidence of enlarged glands, the decline of temperature to nearly normal, and absence of albuminura, due to the elimination of the oil by the kidneys. Thus the activity of the poison is very effectively checked within a few hours.

But he further states that if administered before eruption and active symptoms have set in, it will abort the disease, and that it will act as a complete prophylactic to those exposed to it.

Salicylic acid is rapidly acquiring a reputation in treatment, as well as prophylaxis, of this disease. In from two to five grains daily it is said to be effective in protecting the system against an attack.

Dr. Illingworth, in the *Edinburgh Medical Journal*, relates his experience in this disease with the biniodide of mercury, on the principle that it acts as a germicide. The dose used (for a child 7 years of age) is one-sixteenth of a grain thrice daily, rubbed up with sugar. However, he prefers giving every three or four hours a half drachm of the bichloride of mercury solution (Brit. Pharm.), giving, also, one and one-half to two grain doses of iodide of potassium at the same intervals. He claims the usual benefits, that it "modifies the course of the fever, reduces the temperature, checks or altogether prevents the inflammation of the skin, and prevents the dreaded sequelæ."—*Med. World.*

POSTICUS PARALYSIS IN INFANTS.

Dr. Robertson (*Lancet*, 1891, ii., 936.) read before the Northumberland and Durham Medical Society, a paper on the condition of childhood which he thus named. The symptoms included prolonged and difficult inspiration, sometimes even cyanosis, with drawing in of ribs during inspiration. Marked pharyngitis was present. The symptoms were removed by repeated intubation and treatment of the pharyngeal affection. He regarded the symptoms as being due to bilateral impairment of the postici muscles.

HYGIENE.

EXAMINATIONS FOR ARSENIC IN THE LABORATORY OF THE HEALTH DEPARTMENT AT COPENHAGEN.

In a report on this subject, C. Gram states that in all 412 articles were subjected to a chemical analysis for arsenic. Of this number, 91, or 22 per cent., contained arsenic. Among 186 samples of wall-paper, 26 contained arsenic, 19, however, in minute quantity. Of 64 samples of wall-paper border, 30 contained arsenic, 14 only in traces. Among 78 samples of cloth and ribbon, 17 contained arsenic, all in considerable quantities. Of 17 samples of artificial flowers, 3 contained a very noticeable quantity. Of 50 kinds of candles examined, 15 contained arsenic in considerable quantity, all of which latter, however, came from the same manufactory.—*Tidsskrift f. Sandhetsplei*, vol. ii, No. 4.

TRAILING DRESSES.

It is difficult to detect anything beautiful or becoming in skirts of such length as to gather up the maximum amount of dirt when its possessor takes her walks abroad. At the same time, the news that the Supreme Sanitary Board of Hungary has opened a "regular campaign" against dress trains on the ground that, by sweeping up the dust, they contribute to the spread of "tuberculosis and typhus fever and other maladies," is calculated to raise a smile. On æsthetic grounds these trailing garments are to be deprecated, but the merest zephyr probably causes more commotion of the germ-laden dust than the passage of a princess. This is playing at sanitation, and when one reflects upon the multitude of hygienic reforms more or less urgently called for in Continental countries, sumptuary edicts of this description remind one forcibly of the "straining at the gnat." Moreover, history teaches us that the ladies are not to be coerced in the matter of dress. Coaxing will sometimes—though rarely—bring about a partial reform, drastic measures, never! It is not a mere selfish dis-

regard for the health of others that underlies this obstinacy, because the ladies show the same lofty indifference when their own health is in question. The fact is, they feel intuitively that dress is one of the most potent factors in evolution, in respect of sexual selection. It is idle to warn them that small waists are as abhorrent to nature as a vacuum; they know by experience and tradition that small waists are appreciated, and small waists they must therefore have *per fas et nefas.—Med. Press.*

PROPHYLACTIC TREATMENT OF HEREDITARY TUBERCULOSIS.

Solles (*Rev. Mens. des Mal. de l'Enf.*, September, 1891.) believed that hereditary tuberculosis existed in a sporular form, the tubercular sporule being the progenitor of tuberculosis in the majority of cases. The proof of the existence of the tubercular sporule is that upon a section of a miliary granulation no bacilli are found, but if a rabbit is inoculated with this granulation, the animal will die from phthisis, and numerous bacilli may be found in its body. In most of the scrofulous lesions, which are very suggestive of tuberculosis, no bacilli are found. These facts seem to demonstrate the existence of a hereditary tuberculosis, which is not bacillar, but sporular. Phthisical and scrofulous subjects eliminate specific spores by their excretory organs. The author has demonstrated this to his own satisfaction by inducing tuberculosis in guinea pigs, which he had inoculated with the fæces, urine and semen of tubercular and phthisical subjects. These experiments enable one to formulate principles for the prophylactic treatment of hereditary tuberculosis. It would consist in the expulsion of the spores by increasing the functional activity of the excretory organs, the skin, kidneys, and intestine, thus preventing the development of the disease. It would further consist in securing the resolution of the sporule accumulations by the use of the iodide of potash, salt-water baths, and revulsives.

QUININE AS A PROPHYLACTIC AGAINST INFLUENZA.

Graeser first recommended quinine as a prophylactic in influenza in *Berl. Klin. Wochenschr.*, in Dec. 1889. Following his recommendation, Fraujen used the drug with good success. Each soldier of a battalion of infantry (about 450 men) received a daily dose of eight grains of quinine in whiskey; in the course of three or four days the influenza had entirely disappeared from amongst the soldiers, while it continued to spread amongst the civilian population of the town.

Finkler has likewise made favorable reports concerning this remedy, also claiming for it a direct curative action after the disease is fully established, which according to his experience, is not shared by antipyrine and salicylic acid.

Schelter reports his experience with the same method in a cavalry regiment. For over a week quite a number of cases of influenza had occurred in every one of the five troops of the regiment. He then commenced the daily administration of eight grains of quinine in one-half oz. of whiskey to each of the ninety-one men comprising the second troop. Only seven of these were taken sick subsequently; that is three men on the 2d, two on the 3d, one on the 5th and one on the 6th day. From this time on, the troop enjoyed an entire immunity from the disease, while in the remaining four troops the number of cases developing after the experiment was begun is given as 21, 19, 42 and 31, respectively. If the three men who were taken sick on the day after the first dose of quinine was given are left out, its prophylactic effect it even more striking.

THE ÆTIOLOGY OF FIBROMYOMA.

Prochownick, (*Deutsche med. Wochenschrift*, No. 7, February, 1892) observed several cases in which the patients were syphilitic and in which the antisyphilitic treatment had no effect whatever upon the myoma. Myomata are found in cases where there is either some specific irritation of the walls of the vessels, or where there is a tendency to the formation of tumors which grow as a result of irritation. The syphilitic virus may perhaps be considered a specific irritation in this sense, but the tendency of syphilis is to cause a contraction of the tissues, and not a proliferation. Observations would tend to make us look upon the theory of the formation of these growths as the result of a variety of irritative causes, as the more tenable and more satisfactory explanation.

MEDICAL CHEMISTRY.

DETERMINATION OF THE SPECIFIC GRAVITY OF POWDERS.

The *Chemischè Zeitung* thus describes the method of Smeeth. Vaselin is placed in a watch glass and heated to expel all air-bubbles. It is allowed to cool to 60° F. and the whole is then weighed in water. The vaselin is again slightly heated to fluidity and a weighed quantity of the powder to be tested is sprinkled over the surface. After cooling as before the whole is weighed and the usual calculations give the specific gravity desired.

NOTE ON PAYEN'S PROCESS FOR THE DETECTION OF FREE MINERAL ACIDS IN VINEGAR.

According to Payen's processs, 100 cc. of the suspected sample are boiled for twenty or thirty minutes with 0.05 gm. of potato starch. If no mineral acids were present the starch will have been but little acted upon (dissolved), and will consequently show with the iodine test; but the presence of even 2 parts per thousand of sulphuric acid is said to be sufficient to convert all the starch into dextrin or glucose, and even then it will give no true coloration with iodine. This process is almost a standard one, and has scarcely ever been attacked; but F. Corril, a French analytical chemist, has stated recently that he cannot recommend it, as he still obtained the starch reaction with vinegar containing 5 parts of sulphuric acids or 5 parts of either hydrochloric or nitric acid per thousand. Hence vinegar dealers, unless their own experience agrees with Payen's for varying percentages of adulteration, should not rely too implicitly on this test.

NEWS AND MISCELLANY.

LEGAL RESTRICTIONS OF HYPNOTISM.

A bill to restrict the use of hypnotism has been introduced into the New York Legislature. It is entitled "An Act to Prohibit Public Exhibition of Hypnotic experiments, and to Prohibit Hypnotic Treatment by Anyone except duly Licensed Physicians." It contains the following clauses: (1) It shall be unlawful for any person except duly licensed physicians in the course of lectures to medical students, or before scientific bodies, to give exhibitions of or perform hypnotic demonstrations in public. (2) It shall be unlawful for any person not a duly licensed physician to hypnotize another. (3) Any person violating either of the foregoing provisions of this act shall be guilty of a misdemeanor. It is expected that the bill will have the support of the medical profession throughout the State of New York. The English of the bill might with advantage be submitted to some authority on Parliamentary style for revision, but its meaning and intention are admirable, and we hope it may speedily become law. With the examples of Belgium and the United States before it, perhaps our own Legislature may at last be roused to take similar action.

EPILEPTIC COLONIES.

In the current number of the *Journal of Mental Science* Dr. C. Theodore Ewart discusses in an interesting manner the ever-present problem, What is to be done with epileptics? The question is discussed principally with reference to the working of epileptic colonies, in the establishment of which this country has taken so far scarcely any practical steps, and Dr. Ewart's paper is an important contribution towards the solution of the problem. After describing the various efforts which have been made in other countries to grapple with this subject, he summarizes the main principles which he thinks should be observed in the organization of such a colony. The first essential is land, to consist of at least 500 acres of farm and woodland, well adapted to agricultural and horticultural purposes, within easy access of a large city, which would naturally supply a market for the produce. Then there must be small buildings, arranged in separate divisions for the male and female patients, each of the divisions to make provision in separate cottages for the demented, the convalescents, the school children, the workers, and the private patients of the higher classes. Medical care of each patient must be provided for, and there must be educational provision for epileptic children, and workshops, farm buildings, dairy, etc., for the adults, as well as a special laboratory for the study of epilepsy by a skilled pa-

thologist. The two arguments advanced against the establishment of two types of asylums are that there would be a sameness of occupation, a want of hope, and an absence of object, calculated to drive a sane man into insanity in a short time. To this argument Dr. Ewart replies that in such a colony as is proposed there would be neither lack of objects nor absence of hope. The second argument touches the financial question, for it might be said that the drafting off of chronic cases would necessitate the introduction of a larger number of sane workmen and workwomen. To this Dr. Ewart's reply is that the welfare of the patient must be the first duty of a committee, and he protests against the idea that the chronic cases are incurable. Even if they are that is no reason why they should not be made useful, as such a course would give them an interest in life which, to say the least, would tend to ameliorate their condition. Besides, by separating the acute from the chronic, each class is placed in better circumstances for rapid recovery; the time of lodgment would thus be shorter, and the expense correspondingly lessened. This great problem is one which must be faced; it is obtruding itself more and more every day, and if by the means proposed we can in any way lessen the misery and brighten the lives of many of our fellowmen and women, while we protect the helplessness of childhood, and develop it into something better and more useful than under present conditions it has the chance of attaining, it is our duty, and it ought to be our pleasure, to make the attempt, even if it may entail at the commencement some sacrifices. But even from the economic point of view such a course will in the end bring its own reward.—*Lancet.*

THE ÆTIOLOGY, DIAGNOSIS AND TREATMENT OF THE PREVALENT EPIDEMIC OF QUACKERY"

Dr. Geo. M. Gould, in a recent paper under the above title writes: "I have been surprised to see how a few minutes' talk with such people (believers in homœopathy) makes it plain to them what silly fools they have been, and how egregiously they have been duped. I have looked about for some scrap of literature I could hand to these folks, to show them what roaring nonsense they unwittingly gave their assent to. Oliver Wendell Holmes's little skit is almost the only such thing. Convinced, however, that people need and will profit by simple instruction honestly, plainly, justly, put before them, I wish to have a little pamphlet prepared that, historically and actually, will show up the ridiculous pretensions of modern homœopathic practice. I shall, therefore, postpone a bit of private pleasure I had planned, and offer a little prize of $100.00 for the best essay on the subject. The essay should not contain over 15,000 words, and in simplicity and directness should be adapted to the commonest lay understanding. Papers should be sent me on or before January 1, 1893, type-written, without the name of the author, but accompanied by a sealed letter, giving the author's name with motto or *nom-de-plume.* The essay will be given to a competent committee, and when their decision is reached the sealed letters of the authors will be opened, and the prize sent the winner. The essay will then be cheaply but well printed in large quantities, and supplied physicians at the cost of printing."

THE VIENNA MEDICAL SOCIETY.

At a recent meeting of the Imperial Royal Medical Society of Vienna, Professor Billroth announced that 9,000 florins had been subscribed for the erection of a building to be used as the permanent home of the organization. Of this amount the Emperor gave 5,000, and a lady who wished to remain anonymous gave 4,000. The individual members of the society then subscribed a sufficient amount to secure the erection of the building.

THE PHYSICIAN.

The following is a translation of an epigram written by Cordus in the sixteenth century:

The Physician like an angel seems
When he in the sick room brightly beams,
And like unto a god is he
When he's removed the malady.
But in a different light we view
The doctor when his bill is due;
Our alter'd eyes we at him level
As though he were the very devil.

—Dr. Carl.

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THE
MEDICAL AND SURGICAL REPORTER.

No. 1842. PHILADELPHIA, JUNE 18, 1892. Vol. LXVI—No. 25.

Clinical Lectures.

ALCOHOLIC PNEUMONIA.

By PROFESSOR ALFRED L. LOOMIS, M.D.

DELIVERED AT THE BELLEVUE HOSPITAL, NEW YORK.

Gentlemen:—This man says that six days ago, after a wetting, he was seized with pain in his back, and "all over," without any chill. There was some pain in the right side, which continued until the next day, when he began to have a cough with thick, whitish expectoration. When lying on the right side, both pain and cough were aggravated. His previous health had been very good; he has had no venereal disease, and he has been accustomed to drink whiskey several times every day. His history undoubtedly points to a pleurisy, but this may be associated with pneumonia or bronchitis. He may or may not have cirrhosis of the liver. Alcohol acts very differently on different individuals; on some persons, it seems to act as a poison, on others, it has no such action. The same may be said of tobacco, so that the amount of liquor taken is not always a guide to the effects. I remember a young man, eighteen years of age, coming to me at the college clinic, who began drinking when nine years old, and who had averaged about half a pint to a pint of whiskey daily for ten years. When I saw him, he had pneumonia which did not seem to trouble him very much; it ran a mild course, and was a typical pneumonia. I have seen him several times since, and he looks perfectly healthy, yet he continues to drink his usual quantity of whiskey. Of course, we do not ordinarily consider such a subject a good one for pneumonia. The alcohol did not seem to have produced any effect on his heart. The patient before us has more the appearance of one with pneumonia than with pleurisy. He was admitted to the hospital this morning, and his temperature at the time, was 100°. This would seem at first to be against pneumonia. It is said that the pulse of pneumonia is full and easily compressed, and that the pulse of pleurisy is hard and not easily compressed. This man's pulse is about 100 per minute, and is compressible, and there is slight blueness of the finger nails. His respirations are but slightly accelerated—34 per minute, yet there is certainly no notable dyspnœa. There is much more abdominal than thoracic breathing, but not much difference in the motion of the two sides of the chest. There is loss of resonance and a slight increase in the vocal fremitus on the right side anteriorly. In performing auscultation, you should endeavor to cultivate a habit of concentration of effort, so that you will hear only the lung, or only the heart as the case may be; it is a matter of the mind, not of the ear, and after long practice, you will be able to perform auscultation satisfactorily even when there is much noise in the room.

In the right lung, in front, we hear on ausculation some fine crepitation, and some coarse râles, and broncho-vesicular breathing; behind, on the right side, there is flatness on percussion at the apex, and the breathing in the lower portion of the right lung is vesicular, with a drum-like quality to it. There is bronchial breathing at the right apex posteriorly. In two-thirds of all cases of alcoholic pneumonia, the consolidation begins at the apex, and the fact that there is some consolidation at the apex in such a subject as this, would in itself lead you to suspect that there was a *recent* consolidation. In the majority of these cases, the pneumonia is lobar, and

not lobular. On the left side of the chest, there are the signs of bronchitis, so that it is quite impossible that this is a lobular consolidation, and this seems the more reasonable from its being confined only to the posterior portion, instead of involving the whole upper lobe.

This is a very interesting case, because the history in the first place points strongly to pleurisy—pain in the region of the nipple, with slight cough and expectoration—and his temperature at present would indicate either a lobar pneumonia in the stage of resolution, or else that he never had a lobar pneumonia. Then, the question arises, may he not have had some disease at the apex of that lung before this illness? There is no such history; he has apparently been in robust health. From the amount of bronchitis, and the fact that the pneumonia is confined to the posterior portion of the chest, I should be disposed to consider that he had bronchitis and pleurisy, and secondarily, a lobular consolidation without any previous tubercular disease. Another point would lead to this conclusion. Where you have a lobar pneumonia at the apex, there is generally more dyspnœa than in pneumonia of the base, and very frequently also, delirium, neither of which are present in this case. We have, then, bronchitis and pleurisy, and a lobular pneumonia at the apex of the right lung. We must wait for a time to determine whether any disease of the lung existed prior to this attack. We used to say that a man with a pneumonia at the apex was liable to develop phthisis, but this was before we recognized the tubercular character of all phthisis. Those cases of pneumonia which were followed by phthisis were undoubtedly tubercular at the time the pneumonia developed. I would impress upon you the fact, that in all alcoholic subjects, you should examine the *whole* chest, otherwise you may entirely overlook a pneumonia.

There is nothing to do in the way of treatment for this man, except to keep him quiet, and give him good food, and watch him. If you have such a case in private practice, of course you will be required in most instances to do something, but please remember, if you must do anything, do that which will bring no harm to your patient. Every case of this kind is a law unto itself, and you must treat the individual rather than the disease.

THE INDICATIONS FOR COLD BATHS IN THE TREATMENT OF BRONCHO-PNEUMONIAS.

By DR. HUTINEL,
PARIS, FRANCE.

A CLINICAL LECTURE DELIVERED AT THE HÔPITAL DES ENFANTS-MALADES.

Gentlemen: It would be difficult to find in France, within the last twenty-five years, a physician that would dare to prescribe a cold bath to a young or an old individual suffering from a serious attack of pneumonia. Cold being the principal cause of inflammation of the lungs, it would seem absurd to apply as a remedy that which is precisely the cause of the disease.

The method under consideration is not, nevertheless, a new one. Without going as far back as the time of Hippocrates, who recommended lukewarm baths, I will refer to Bartholin, who 200 years ago prescribed cold baths in pulmonary affections, and to other physicians who, during the same epoch, used for similar purposes, snow or ice. Towards the end of the sixteenth century, James Currie employed refrigeration in the treatment of febrile and inflammatory diseases. It was not, however, until forty years ago, that cold baths began to be scientifically applied in the treatment of pneumonias. The honor of the introduction of this therapeutic means is due to Vogel, of Berne (1850). Nissen, d'Altona, Weber, de Kiel, and others, followed his example. Jürgensen, who has made remarkable studies concerning pneumonias, Liebermeister and Lebert, of Breslau, have given to this method their support. Thomas (1878) has especially studied the treatment of broncho-pneumonias in children. He has preferred the use of lukewarm baths at a temperature of 30° C., with the view to prevent a too great shock to the system. Many other physicians have bathed their pneumonic patients; but in France practitioners have for a long time hesitated in accepting this mode of treatment.

Labadie-Lagrave, in his thesis of 1878 and Hanot in 1880 have reviewed the observations published before their time, but only admit, with reserve, the results al-

leged to have been obtained. However, it must be admitted that after the work of these latter authors, the use of cold baths had been quite generalized, and to-day many physicians are in the habit of prescribing them. The communications of Barth and Rendu to the *Societé Médicale des Hôpitaux*, have greatly contributed to the generalization of the method. The action of cold baths has been principally studied in the pneumonias of adults, but this action is no less remarkable in the bronchial pneumonias of children. Without referring to published statistics, it has seemed to us interesting to determine, based upon a large number of personal observations, what are the indications for the use of cold baths in the treatment of the disorder in question.

What is, I ask, a broncho-pneumonia? It is a more or less extensive inflammatory condition of the pulmonary lobules, secondary, in every case, to an infection of the tubes. This has, in general, its primary origin in simple catarrhs or in the specific catarrhs occuring in the course of measles, whooping-cough, the grippe, diphtheria, etc.; but it often begins in other parts of the system, away from the respiratory tracts, as, for instance, in the intestines. In either case, it is the large bronchi that become ordinarily affected at first, the disease extending itself afterwards to the smaller tubes.

There is no such a thing as *a* broncho-pneumonia; but there are several kinds of broncho-pneumonias. Clinical studies and pathological anatomy have shown this, which has afterwards been confirmed by microbiology. Yet, it must be said that it is quite difficult to establish the clinical, anatomical and microbiological differences, as there does not exist a marked limit between any of the different varieties of the disorder. It has been held that broncho-pneumonias of the pseudo-lobar variety, are due to infection by the pneumococci, and that the disseminated foci of lobular broncho-pneumonias are caused by the presence of streptococci. This theory can be accepted in a general way, but it is too schematic, and cannot be applied to every case. I will not insist upon this point. Bearing in mind that many micro-organisms may be found in the broncho-pneumnias, and that the microbes may belong to several varieties such as pneumococci, streptococci, staphylococci, coli-bacillus, and others, we must not forget that the infection is always primarily bronchial.

In every broncho-pneumonia two principal factors are always to be taken into consideration: 1. the local lesion, that is, the inflammation of the lung, due to irritation, and the reaction of the tissue invaded by the micro-organism; 2. the general infection, due to the rapid increase of the microbes, to the absorption and to the retention in the blood and the various humors, of the toxines produced or secreted by them.

We are familiar with the local lesion: It is an irritation whose point of departure is in the bronchioles, and is characterized by enlargement of the vessels, swelling and desquamation of the bronchial epithelium, diapedesis of the blood corpuscles, exudation of lymph and fibrin in the peribronchial alveoli, all of which phenomena produce a more or less complete obliteration of the bronchi and of the alveoli surrounding these. This inflammation which passes through the successive phases of splenization, hepatization, and often suppuration, results in an interference of the pulmonary function. In other words, we have: 1. A narrowing of the respiratory field; 2. An obstruction of the pulmonary circulation, giving rise to dilatation of the right side of the heart, and sometimes to the consequent cyanosis; 3. Finally, when the lung assumes a fixed condition, as it were, due to the coagulated exudate in the alveoli, there is produced an interference in the expansion of the thorax, and, through a mechanical obstruction, we have resulting emphysema and congestion.

We are also familiar with the general symptoms. In the first place, there is fever. We have no broncho-pneumonia without fever. Sometimes, hyperæmia is considerable as are also the dangers which accompany such condition. The pulse is accelerated, arterial pressure is lowered, while that of the veins is increased. The secretions, such as the urine, the sweat, the saliva, and others, are diminished, and finally, there is retention in the plasma and the various humors, of the toxines and products of tissue change.

Nervous phenomena become manifest. Sometimes there is depression, at others, on the contrary, excitement followed by convulsions, which in themselves constitute a danger.

Dyspnœa, cough, respiratory anxiety,

passive congestion come on *pari passu* with the local lesion and the general infection. I insist upon this point, that is, that the local lesion and the general phenomena do not *always* occur together. The pulmonary lesion and the toxæmia almost never exhibit similar character as regards severity; one or the other predominates. To be convinced of this, it will be sufficient to examine carefully the conditions of the organs at autopsies practised in children who have died from a broncho-pneumonia.

There are cases in which death is explained sufficiently by the pulmonary lesions, which are quite marked. These reveal that the patient has died from asphyxia.

There are other cases, on the contrary, in which post-mortem examination does not explain the phenomena observed during life, phenomena which have been neither worse nor less rapidly fatal. In such cases, the lung exhibits a condition of turgescence; it is œdematous, hyperæmic at the base, with, here and there, spots of ecchymoses; it is crepitant, and may be inflated almost completely; the large and small bronchi are inflamed and covered with a mucous in which the pathogenic micro-organisms are found. Death seems to have been caused by a toxæmia, the local lesion having been outstripped, as it were, of its importance, by the general infection.

Finally, there are still other cases, and these are the most numerous, in which the local lesion and the toxæmia march together, but they do not produce the same reactions. Moreover, there are found, alongside of the primary inflammatory lesions, those of a secondary nature, such as passive congestions, which vary according to the case, and against which we must wrestle if detected in time.

Now, what must we do in broncho-pneumonias? We cannot do much against the local lesion. I do not condemn revulsion; on the contrary, I consider such a measure useful, and I employ it; but I believe that it is not sufficient; often it acts slowly; and it does not appear wise, therefore, to depend on it entirely, especially in serious cases. I will not speak of innoculations with the serum of vaccinated animals; it does not seem to me that this method has given the results we were made to hope for by recent works upon the subject, particularly those of Mosny. It is especially against the different manifestations of the general infection that we must act; and it is precisely in those cases in which the general phenomena are quite marked, that cold baths are particularly useful. Let us examine how these baths modify these various symptoms.

A cold bath, in cases of hyperthermia, diminishes, undoubtedly, the heat of the body; but there are chemical antipyretics which act as quickly, and, in general, more powerfully—such as antipyrine, for example. If to lower the bodily heat were our only object, and the only effect produced by the cold bath, there would be no use of resorting to it in those cases that exhibited marked hyperthermia; but the cold bath not only diminishes the temperature of the body, it at the same time exercises other beneficial influences: it enhances the various secretions, increases the arterial pressure, and sustains the heart; while, on the other hand, most of the antithermic remedies produce, in similar conditions, untoward effects. Antipyrine, which I have cited as an example, depresses the patient, slows oxidation, and promotes in the economy the accumulation of toxic products. Quinine is preferable, but even in large doses this drug does not act with sufficient activity. This remedy is, nevertheless, an excellent adjuvant of the cold bath, and to which you must resort almost constantly.

The diminution of the temperature produced by the cold bath, varies, the thermometer descending one, two or three degrees; in some cases the fall is only several tenths of a degree. The more marked and persistent the diminution of the temperature, the more favorable the results. In fatal cases, the fall of the temperature is insignificant.

The cold bath acts energetically upon the nervous system It gives, as Professor Peter has remarked speaking of typhoid fever, a lashing to the economy. It diminished the depression so marked in certain cases of broncho-pneumonias, and especially suppresses all symptoms of excitement. It is indicated in the period of convulsions. After the bath, the child becomes calm and goes to sleep as soon as the temperature begins to rise again. Cold water acts upon the circulation in a most favorable manner. The first effect, easy to understand, is a constriction of the per-

ipheral blood-vessels, and a sudden increase of pressure in the left side of the heart. At such a time syncope is apt to occur, but this is not, nevertheless, so much to be feared in children as it is in case of adults, since in the former patients; the cardiac muscle is generally healthy.

We must, however, be on our guard in case this accident should occur. If the syncope comes on, the child must instantly be flagellated, and given a hypodermatic injection of ether. The constriction of the peripheral blood-vessels determines an increase of the arterial pressure, steadies and notably slows the pulse. Following the constriction, there is dilatation of the peripheral vessels; the skin becomes reddened, this being due to a secondary derivative effect, a revulsion analogous to that produced by a sinapism, but more extensive. The changes which we have been able to observe in the greater circulation are the same as those produced in the lesser one.

The congestive foci in the lung become diminished, a diminution which, according to Jürgensen, may be detected by auscultating the little patients after the bath. The cough and the dyspnœa also diminish, and sometimes to an astonishing degree. In my experience the cold bath has never produced evil effects upon the lung, and, like many others; I am convinced that the measure has been wrongly accused of being the cause of pulmonary complications.

Upon the secretions the cold bath exercises a most beneficial influence: it increases the amount of urine, and facilitates the elimination of soluble poisons. It does not cause albuminuria, as has been supposed, and we can easily understand how it diminishes, instead of increases, passive congestions. It similiarly promotes the salivary and the digestive secretions; under its influence, the tongue becomes moist, the children accept voluntarily articles of food. Patients who have been bathed return to life, to use the happy expression of Juhel-Rénoy.

You see, then, that cold bathing acts energetically upon the circulation, the secretions, the nervous symptoms, and upon the dyspnœa when this is out of proportion with the pulmonary lesions. Is the measure under consideration indicated in all cases? Certainly not. Its application in all cases of broncho-pneumonias would be a very bad practice, indeed. We must always proceed in such a way as not to sink into disrepute the best methods. The bath is useful in these cases in which the general symptoms are marked, and in which the local lesions are not very extensive. I will detail the following case, which occurred in a little daughter of one of our most distinguished colleagues:

B., a child, 5 years of age, enjoying the best of health, suffered an attack of influenza on the 26th of November, 1891. The disease did not exhibit any peculiarities until the 24th, when, together with a marked elevation of the temperature there came on symptoms of great excitement, followed by those of depression. Auscultation only revealed numerous disseminated râles in both lungs. The patient became worse on the following day and, in spite of her having been placed under hydrochlorate of quinine in doses of 0.40 grammes a day, with the frequent application of mustard plasters, there appeared on the 27th a marked rise of the temperature, 40° C.; there was also found over the angle of the right shoulder-blade, a zone of dullness in which sub-crepitant râles, without any blowing sound, were detected.

She became still worse on the following night; on 28th the temperature was 41° C.; auscultation and percussion both revealed a double broncho-pneumonia: that is, over the base of the left lung, and also a little above the angle of the right shoulder-blade. In two hours the temperature went up to 41.6° C., the condition of the little patient became very alarming; her face was reddened, swollen; when made to speak, the muscles of the face would exhibit convulsive movements, giving rise to a grinning expression and one of terrible anxiety; she complained, besides, of a violent pain over the left side, and her excitement became exceedingly marked, this being a true jactitation. The number of respirations was 56 per minute.

In the presence of such distressing symptoms, which appeared to augur an early fatal termination, I decided to plunge the moribund child in a bath at 30° C. The duration of this bath was 16 minutes.

When the little patient was taken out and placed in her bed, the scene had absolutely changed. The pain in the side, the excitement, the convulsive movements of the muscles of the face, all had disap-

peared, and there came on a condition of perfect calm. The little child slept profoundly for about a quarter of an hour; the respirations were reduced to 40, and the pulse from 142 came down to 120 per minute.

This amelioration did not last long; on the following morning, the 29th, the temperature rose to 41° C., that is, in the course of 11 hours; the excitement and the cough re-appeared. I gave her a second bath of 12 minutes duration. Improvement occurred, but very soon afterwards, the temperature went up again, and I then ordered a third bath at 25° C. also of 12 minutes duration.

The third bath was the signal of a definite defervescence, and the little child entered into a true convalescence, which became more and more marked every day, and *pari passu* with the favorable changes in the local lesions, there was a marked improvement of the general condition. The period of convalescence was, nevertheless, prolonged, but the child finally made a complete recovery.

Families will often oppose the application of a cold bath in these cases: under such circumstances we must employ a certain amount of artifice. Under the cover of revulsion you add to the water a little mustard, for, as a general rule, parents believe in the efficacy of this simple remedy, and it behooves us to wrestle, not so much against their reluctance, as against their over-zealousness.

In favorable cases the temperature is decidedly lowered after the bath, and often descends to the normal point; the pulse is slowed, and calm is insured. These happy results are only obtained in cases in which the fever is high and the excitement marked, and in which the local lesions are of little moment. Nothing similar is observed when the lung is in a condition of marked hepatization, without there existing any febrile re-action; in these cases the depression produced by the bath is a negative or only a moderate one, the relief obtained being slight. This measure here, then, is useless, and it may produce, on the other hand, untoward effects. The fever which in part only, it has caused to disappear, may serve to enchance phagocytosis; we, therefore, ought not to suppress it, lest we place a weakened system in a greater jeopardy.

When an extensive lesion of the lung is accompanied by serious general symptoms, the bath is often indicated, as it produces a quiet condition of the patient, lowers the fever, diminishes the cough, and makes us, on the other hand, gain a certain amount of time. In children, the bath sustains the strength and diminishes pulmonary hyperæmia; but often this amelioration is of short duration, and there comes a time when cold water produces no effect at all. In such cases, the prognosis is exceeding bad, and death may be expected at every moment.

I shall not burden you with statistics. At the Hospice des Enfants-Assistes, I have obtained most excellent results, but I have also observed many failures. Serious, complicated broncho-pneumonias occur in very young children who live amidst bad surroundings.

I have often seen patients, after a marked amelioration, succumb to a secondary infection such as choleriform diarrhœa, at a time when I thought that convalescence had already set in. In city practice, I have treated 12 children suffering from broncho-pneumonia, with cold baths. Five deaths occurred, and among the other seven cured, there were one 2 months, one 6 months, one 9 months, and two 1 year old each.

Can we, from the nature of the broncho-pneumonia, point out a sure indication? Not absolutely. It is especially in the broncho-pneumonias caused by pneumococci that we are more apt to succeed. The broncho-pneumonias caused by the streptococci, are generally of a protracted nature, and exhibit quite extensive lesions. In these cases the cold bath is useless.

It remains for us to find out whether a cold bath is useful in the broncho-pneumonias caused by the coli-bacillus; these inflammations are not yet thoroughly understood, and are besides quite rare. Moreover, it may be said that the nature of these broncho-pneumonias is less easy to establish. To do this it would be necessary to puncture the lung, in order to examine what kind of microbes had invaded this organ; but I do not believe that such a method should be resorted to.

To summarize then: It seems to us that cold baths are useful especially in those cases in which the general symptoms are marked, exceeding in importance and gravity the local phenomena; as, for example, in those cases characterized by a suffocating

catarrh, and in those broncho-pneumonias in which the nervous symptoms predominate. When the temperature marks 41° C. the cold bath is always indicated, because the hyperthermia constitutes by itself danger. The same indication holds good, when, with the existence of more or less extensive local lesions, the temperature and the re-actions are excessive.

When the local lesions are quite extensive, and the fever is intense, the cold bath may sustain the patient by producing a certain amount of defervescence, but it does not generally bring about a cure.

In the presence of serious local lesions, with little febrile reaction, the cold bath is contra-indicated. It is similarly contra-indicated when the action of the heart is disturbed, although this is exceptional in children; or when there is a condition of marked adynamia. Age does not constitute a contra-indication. In fact, cold bathing produces in young children marvellous results, because in such subjects the general symptoms predominate and do not always bear any relation to the local lesions.

The manner in which I generally give a cold bath, is as follows: For the first bath the water must be at 28° C, the duration being from five to ten minutes. The child must be taken out before it is chilled. For the other baths the temperature of the water may vary from 24° to 18° C; it is not necessary that it should be lower. The child is to be put into the bath entirely naked, and thus kept there, the temperature of the water being regulated gradually by adding more cold water, as required. The head of the child is then to be bathed by affusion. In about five, eight or ten minutes the little patient is taken out, wrapped in woolen sheets, and made to take some nourishment. An hour later the temperature of the body is taken, in order to see if it has diminished. Two hours after, that is three hours after the bath, the thermometer is again applied. If the temperature is still above 38° C. a new bath is given; if below, it is better to wait. The temperature, however, must be taken every two hours, and the child put back into the cold bath if the bodily heat is above 39° C, unless the excitement and the dyspnœac symptoms have disappeared.

The baths should be continued while the hyperthermia lasts, given as many as seven during the first day. In favorable cases the number should be diminished on the following days.

As an adjuvant I advise the administration of quinine, which, instead of depressing, sustains the heart, and also hyperdermatic injections of caffeine and ether if there be tendency to collapse or syncope. The child should be nourished with milk and water, broths, and made to drink as much as possible, in order to increase the urinary secretion, coffee, and especially grog and cognac. A child one year old can take from 15 to 30 grammes of alcohol a day; one three years of age as much as 60 grammes. Alcohol has the advantage of aiding the favorable reaction which is produced after the bath. When such a result is not observed, it is generally because the bath has been prolonged; it is, therefore, important to see that the duration of the following baths is diminished.

The cold baths are not only indicated in the catarrhal or grippal broncho-pneumonias; they are similarly of service in those occurring during an attack of measles or of whooping-cough. The prognosis in these latter cases is always exceedingly bad. It is almost fatal when the pulmonary inflammation is secondary to diphtheria.

I hope, gentlemen, that I have been able to impress you with the fact that cold baths constitute a useful means to employ in the treatment of broncho-pneumonias of children; they do not constitute, however, a sovereign remedy, nor is the treatment applicable to all cases.

Employed when especially indicated, cold baths produce excellent results; but applied indiscriminately they are often the source of disappointment. — Translated from *Le Bulletin Médical*, May 11, 1892.

VASCULAR TERRITORY OF THE HUMAN SKIN.

Spalteholz, of Leipzig (*La Semaine Médical*, 1891, No. 47), gives these results of his studies upon injected tissues: 1. The number of afferent branches and their diameter is variable; when pressure is brought to bear they are more numerous and larger. 2. Their length is greater where the skin is very mobile. 3. There exists multiple anastomoses, the arteries of the skin never ending as terminal arteries. 4. The size and the number of the anastomoses are always different, being largest and most numerous where there is increased pressure.

Communications.

THE PRESENT STATUS OF OBSTETRICS AND GYNÆCOLOGY.*

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In 1878 I delivered the annual address of the Alumnal Association of the Medical College of Ohio, on the subject of the "Present Status of Gynæcology, and its Relations to General Medicine." This was nearly 15 years since. It has occurred to me that there is no subject for me better adapted for a society of this kind, composed of gentlemen of almost all ages and specialties of medicine, of the great state of Ohio, than this very same one.

What is the present status of obstetrics and gynæcology to-day? No one will for a moment say that it is what it was 15 years since. What it will be 15 years from now, is only a matter of speculation.

To the thoughtful inquirer, it is plain that the relation of obstetrics and gynæcology to general medicine is a most intimate and inseparable one. The idea that a physician may practice gynæcology in its exclusive sense, without a knowledge of the diseases of the body at large, or with a disregard of the general bodily conditions, is one of the most absurd and dangerous doctrines. There is comparatively little gynæcology outside of the domain of general medicine; on the other hand, there is scarcely a disease of the general system in the female of any considerable importance or duration, which does not affect the circulation, the innervation, and the functions of the pelvic organs, We venture the assertion, and challenge the successful contradiction that no disease or class of diseases in the economy, set up more decided disturbances or complications at large than those of the female pelvic organs. Medicine although made up of parts is really one. The whole stands by a linking together of all its parts, a separation of any link implies a break in the whole chain. Gynæcology has suffered not a little by this exclusivism of our times. The extreme surgical tendency of some has brought us an unmerited disrepute. Pelvic diseases must be learned by studying medicine in its entirety. Few constitutional diseases, or even local affections of distant organs of the body exist that we do not see in women some peculiar expression of the same in the sexual system. The various states of a changed constitution of the blood, the so-called diatheses and cachexiæ, as anæmia, hydræmia, leucocythæmia, scrofula, phthisis, rheumatism, gout, syphilis scorbutus, eczema, chronic malaria, almost invariably, unfortunately too rapidly, first disorder menstruation, and finally produce organic changes in the uterus. A neurotic habit, evidenced by attacks of general neuralgia, is accompanied by a neuralgic dysmenorrhœa as is also such a constitution a very important factor in the causation of other pelvic affections.

Again, pregnancy, more particularly the lying-in state, tests the soundness of a woman's constitution. Any imperfection of her system, any blood taint, although hidden, is apt to manifest itself at this time. Pelvic cellulitis, we have noticed, has at times an ætiological constitutional factor, so have mammary inflammations. An enfeebled general health, a disease prior to marriage, present though latent, frequent child-bearing, prolonged and excessive lactation, and many other general causes make a women liable to, and perpetuate sub-involution, hyperæmia of the uterus, with displacements, diseases and complications from which she would otherwise be exempt. Many of the well-known exciting causes, utterly fail to bring about a local disease without some constitutional morbific force operative in the background. In this way, a discovery of one's actual constitutional standard of health is revealed.

Many of the chronic diseases of the uterus, are chronic only in virtue of a diathetic taint, a general imperfection or depreciation of the general health. Therefore, that local diseases of the female pelvic organs require only a local treatment, is a pernicious doctrine, wrong in theory, dangerous and criminal in practice. A gynæcologist cannot be a skilled physician without a knowledge of medicine in general. It is necessary that he diagnosticate, know the cause and proper management of diseases in general. Constantly arising in his special practice, they influence and complicate the acute and chronic conditions, for which his services are sought.

*Read before the Ohio State Medical Society, May 6, 1892.

In turn, while it is not to be expected of the general practitioner that he will differentiate uncommon and obscure pelvic affections, or perform special operations in this field of practice, it is expected that he will understand the importance and significance of symptoms here arising, and the general management of the diseases they express.

Volumes might be written on the influences of civilization and modern culture with its fashionable surroundings and entanglements, modifying the diseases of women. Unquestionably both sexes do not have a few of the physical ailments of a generation since, but it remains a seriously debatable question whether women nowadays do not have many of their diseases more frequently. I believe they do; and look upon it as a penalty of our modern methods of living.

Local medication of the uterus is certainly better understood now than it was fifteen years ago. There can be no question as to the propriety of local treatment, but an ailing woman, afflicted with a disease of her sex, must be at the mercy of the good judgment of an honest physician.

When to medicate, *when not* to medicate the uterus, *how often* and *with what*, are questions to be answered only by a studious, progressive practitioner.

Fluid applications to the uterus have now a diminished field of utility. Intra-uterine medication can be made less painful, less hazardous, and more efficient. Potential cauterization of the uterus is now much less frequently employed, and the use of the inevitable nitrate has almost become a relic of the past. Who can doubt that we better know how to treat endometrial affections than we did? That the endometrium is rather a glandular, than a mucuous tissue, is recognized.

Gonorrhœa, it matters not how contracted, as a causative factor in many female pelvic diseases, has a hitherto unrecognized significance. Massage as a therapeutic agent in gynæcology, is well appreciated, to say naught about the local massage after "Thure Brandt."

Electricity as a therapeutic agent never received such attention. Apostoli has been, and is, an enthusiastic, painstaking, progressive worker. His enunciations have been seconded by careful, observing men all over the world, and he is considered not altogether a misguiding leader. Competent judges in gynæcology say we must use discretion in the selection of cases, in kind and localization, if we do good with galvanism for fibroids of the uterus. There is really no contention between electricity and surgery in gynæcology. Each has its place and field of application, hence usefulness. Unmistakable benefits result from electrical treatment in certain chronic pelvic inflammatory exudations, uterine versions and flexions as well as from some of the uterine inflammations.

We know of little more concerning pelvic cellulitis and pelvic peritonitis than have been so clearly and reliably announced by Bentley and Goupil, in 1857. But our acquaintance with the diagnosis and operative cure of diseases of the Fallopian tubes is only of rather recent date.

The gynæcological world has had its craze for cervical splitting, its trachelorraphy craze, its pessary craze, and now it is having its tube craze. We need but a few years for the Fallopian craze to settle down on a more rational basis. A more clear and thorough elucidation of the diagnostic signs of pregnancy, intra- and extra-uterine, have occurred in recent years. A recognition of early pregnancy, depends usually, not on one symptom, or group of symptoms, but on a painstaking analysis of the sum total of evidence in a given case. The most conclusive evidence is found within the pelvis, in the size, the shape and the consistency of the uterus and surroundings; no sign, but the collective evidence of all signs being considered. Many mistakes in the diagnosis of pregnancy are avoidably and unavoidably made. It would be well to suspect the possible existence or co-existence of pregnancy in every female we are examining who is from 10 to 55 years of age.

One of the most important advances of medical and surgical gynæcology has been the recognition of bacteria in producing certain morbid processes. How many cases of endometritis and salpingitis we know are septic in their origin? Consider the diminished and diminishing mortality rates in modern obstetric practice. One death in 1,000 cases of parturition, in Paris, and none in as many cases in Preston Retreat, in Philadelphia, would have astounded our predecessors. So much for improved septic and antiseptic precautions. We have come to understand that sepsis, not traumatism, is the danger element in obstetrical and gynæcological practice. How many

intra-pelvic diseases of women may yet be stamped out by further bacteriological studies! We know now how to employ the uterine curette, a most valuable instrument, calculated to supersede much intra-uterine medication, so that its ills may be reduced to a minimum; another proof of modern antiseptic evolution. Pessaries we are not as yet ready to dispense with, although their use has been judiciously greatly abridged. Some hitherto-regarded incurable uterine displacements have been made amenable to medical and surgical treatment. Vesico- and recto-vaginal fistulæ, cervical lacerations, vaginal and perineal ruptures are now regarded as largely preventable, and their best treatments are prophylactic and immediate. Stitch-hole abscesses, abdominal herniæ and fæcal fistulæ can generally be avoided.

The greatest improvements in modern surgical gynæcology and obstetrics, we owe to Semmelweiss and Lister. A greater revolution at any time never occurred than these men have been the agents of originating. Recent years have brought their harvests of return to these benefactors. In no direction in recent years has gynæcology grown as in the surgical. Compare the most excellent work of Greig Smith of to-day with the gynæcological surgery of 1856. In 1855, Spencer Wells wrote a small book on the diagnosis and surgical treatment of abdominal tumors. Is ovariotomy justifiable? was the question then. Now, everyone advocates its performance, and that early, too. In recognition of the grand work which has been done for this otherwise incurable disease, witness the operations on the liver, the gall-bladder, the stomach, the spleen, the kidneys, the intestines and other abdominal structures. *Section*, *peritoneal irrigation* and *drainage* have revolutionized abdominal and pelvic surgery. It is impossible to practice gynæcology without a resort to surgical procedures. Such are the causation and nature of many of the gynæcological diseases that surgical operations are for them a *sine qua non*. Modern gynæcology has made its most wonderful advances by surgery. Extra-uterine gestation, uterine cancer, some kind of uterine displacements, and otherwise unrelieved uterine fibroids testify. Not only has vaginal hysterectomy had established for it a proper place, but supra-vaginal hysterectomy is destined to be the operation, if any, for certain, not all, uterine fibroids. No real contest can exist between high amputation of the cervix uteri and complete vaginal hysterectomy, for uterine cancer.

More than my allotted time has been consumed in praise of what gynæcology has done and will do. Many pages might be written concerning modern gynæcological abuses. Every department of medicine and surgery has been a subject to abuses. Intra-uterine medications, Emmett's operation of trachelorrhaphy, Sims' operation of cervical discission, Battey's operation of oöphorectomy, and not a few other operations by laparotomy and vaginal hysterectomy have each and all been abused. No intelligent rational physician will for a moment attempt to assert that these surgical procedures have no place in practice, and should be ignored. Well would it be if every medical man would carefully consider the supposed curative effects of operations *per se*. Medical records are full of them. The psychical influences at work are at times a most interesting study. The power of the body, especially the pelvic organs, upon the mind, is ever to be held in view. Always endeavor to avoid developing a neurosis, through introspection, especially in morbid patients.

The modern tendency of to-day is to make many of the female pelvic operations on a very small pretext, made unnecessarily, either for life, comfort or the preservation of health. Many of the well recognized failures of oöphorectomy and salpingo-oöphorectomy have followed operations done for hystero-neuroses, under a mistaken diagnosis. Doleres claims that four-fifths of the oöphorectomies done in Paris have been unnecessary. How many times unnecessarily in this country, no one can tell.

Notwithstanding all the drawbacks and abuses gynæcology has encountered, the young science and art applied have relieved many a suffering, helpless woman, prolonged many a helpful life, and saved from the grave many a worthy, noble companion for usefulness, otherwise unhelped.

DYSPEPSIA.

℞ Subnitrate of bismuth.
Sulphate of magnesia.
Prepared chalk.
Phosphate of lime.....āā 150 grains.
Sig.: Divide into 40 powders. One before each meal.

—*Dujardin-Beaumetz.*

TWO CASES OF FRACTURE OF THE PATELLA, (ONE A COMPOUND FRACTURE; THE OTHER A SIMPLE TRANSVERSE ONE) WITH OPERATION FOR MAINTENANCE OF FRAGMENTS.*

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OSHKOSH, WIS.

My only reason for reporting these cases is to add the widow's mite to the current history of these sometimes grave and interesting cases.

Case I. John D., aged 36 years, married, farmer, and healthy. On Oct. 2d, 1891, he was running a steam thresher when a cry of fire was heard. He jumped from the table beside the cylinder to investigate the matter, when he slipped, and in falling his right knee came into contact with the cylinder, running at usual velocity with power on. In extricating him the right foot also shared the same fate. Fortunately there were with him two or more friends who had some experience in the modern management of wounds, and though ten miles away, put clean cloths around his injuries and took him to my office for care. A casual examination revealed a compound comminuted fracture of the right patella, the loss of the large toe on same foot, and serious injury to the next adjoining one. He was placed under chloroform, the knee thoroughly cleansed, several small pieces of the patella removed, the joint irrigated with 1-5000 solution corrosive sublimate, a rubber drainage tube inserted, but not passed through a counter opening, the wound packed with sublimated gauze to control a moderately free hæmorrhage, dusted freely with aristol and then dressed with usual dressings, no iodoform. There was only a little displacement of fragments. After amputating and dressing the toe, a plaster dressing was placed upon the limb from ankle to body. Two days following the accident the patient was visited and the knee dressed. The pulse and temperature were only slightly above normal, from one to two degrees rise of temperature, and remained so for about a week when they were normal continuously. The dressings were considerably saturated with bloody serum, and synovial fluid, but the swelling was only moderate and pain not great. The gauze packing of wound was removed and the wound and surrounding parts were now, and upon all subsequent dressings, thoroughly irrigated with hot 1-5000 sublimate solution. I now used a bone drainage tube, hoping that my wound was aseptic and that an earlier closure of the joint might thus be secured. The next dressing was made two days hence, and thereafter at intervals of four, five, six, seven, eight, nine, eleven and sixteen days respectively at his home, and was examined and protective dressing applied two or three times at my office. The cause of the somewhat prolonged dressings was a little carious bone which was finally absorbed. No pus made its appearance. Slight passive motion was commenced after the fourth week, with a condition now which promises a very useful limb and considerable motion of joint. Now, 7 months after his injury, he is walking with a cane simply as a guard on uneven ground, but can walk as briskly as the ordinary walker and is able to attend to general business of farm, which does not require continuous walking. (I here presented a photograph showing front profile as well as side, demonstrating amount of flexion now secured.)

Case II. Thos. Mc A., age 32, married healthy. About 11 A. M. Oct. 30th-1891, jumped upon a moving train for a short ride. In alighting from the train he fell upon a street pavement, causing a simple transverse fracture of his right patella, with much separation of fragments. In an hour or so after the injury he was seen and a temporary dressing applied. Two years or so previously I saw Dr. T. M. Marloe do an operation upon a similar case in the New York Hospital, and his operation with his remarks upon the same occasioned a resolution on my part to do likewise, when a proper case came to me. It was advised in this case and performed some 16 hours after the injury was received. The operation performed was advised by Volkmann, modified by Kocher, and called "peri-patellar suture," except that here silk braid was used instead of silver wire. This method was suggested by a young surgeon, Dr. Clark of New York, and was performed several times in the New York aud Chambers St. Hospital by Drs. Marloe and L. A. Stimson. It con-

*Read before the Wisconsin State Medical Society, May 4th, 1892.

sists in carrying a long needle threaded with stout braided silk down transversely through the ligamentum patellæ, close to the latter, and from a perpendicular line down so as to just escape its outer or inner margin, to a point corresponding on the opposite side; from here the needle is returned to the opening from which it emerged and carried along the perpendicular line, subcutaneously, to a point corresponding to the upper border of the superior fragment, the suture is now drawn up, leaving a liberal loop at the point from which it last entered, then passed into the opening from which it just emerged, dipped down through the tendon of the quadriceps extensor, and liberated again at a corresponding point on the opposite side; it is now returned through last opening, passed subcutaneously, and emerges at point of first entrance, drawing the suture so as to bury it. An assistant now forces the upper patellar fragment down to the lower, and retains it there while the operator tightens firmly the suture over upper fragment with extremities of sutures on one side and loop left on the other: when firm the loop is drawn out and the suture tightly tried and buried subcutaneously. If done properly the patella is now firmly surrounded by the silk without entering the joint, and buried subcutaneously, and, barring accident, will long remain to retain the fragments. The knee was now carefully dressed, and the limb enveloped in plaster splint from foot to body. The foot was slightly elevated while in bed. The following day, November 1st, pulse 65, temperature 99°; November 2d, pulse 85, temperature 102°. He was now given magnes. sulph. sufficient to thoroughly evacuate the bowels. November 3d, pulse 105, temperature 103°. He was now given acetanilid grs. v. I may truthfully say that the surgeon was now in great need of some soothing cordial to soothe his disturbed mind, which did not reach him until the next morning, November 4th, when the potion came in the form of a pulse of 78 and temperature 99⅘°, with good countenance. November 5th, pulse 68, temperature 98⅗°, and from now on normal. The dressings were not disturbed until November 28th, when the condition was perfect. The swelling was very slight, and moderate motion produced no pain. December 6th, five weeks after operation, I found him walking about the house without cane or crutch. January 11th, ten weeks and two days after the operation, all support, except flannel bandage, was removed, and he walked wherever he desired without artificial aid. At the last examination there was one-eighth of an inch between the fragments and what I believe to be bony union. It is of the utmost importance to bear in mind that this, or any other operation for this injury, should never be undertaken without adhering scrupulously to the minutest details of aseptic surgery. I am fully aware that any operative treatment of simple fracture of the patella is fairly subject to question, in view of the practical results of non-operative management. Of the operative measures, however, this one seems to possess, to my mind, the merit of thoroughly securing the object of all treatment, in the simplest and most commendable manner. To offset its dangers, is the greater certainty and rapidity of repair and usefulness of limb, should no operative accident occur. In point of time this limb was liberated, and seemingly with safety, some months quicker than by ordinary methods of treatment and with rapid restoration of function. He now walks so perfectly, that, until wearied, his friends say that they could not tell by observing his movements that he had been injured. His knee is not yet strong enough to endure continued hard use, but he is ready for labor of a character consistent with limb. I have also a photograph showing similar views to the former.

CHLORINE IN TYPHOID FEVER.

Yeo (*Lancet*, Nos. 3528 and 3529, 1891) has recommended free chlorine as the best agent for the antiseptic treatment of typhoid fever. Forty minims of pure hydrochloric acid are added to thirty grains of potassium chlorate in a flask and chlorine permitted to generate. In two or three, water is gradually added, and the tightly closed flask is thoroughly shaken. Then sufficient water is added to make ten ounces. The result is an almost perfect solution of chlorine. To twelve ounces of this solution are added from twenty-four to thirty-six grains of quinine hydro-chlorate and an ounce of syrup of orange-peel. In accordance with the severity of the case, an ounce of the solution may be administered two, three, or four times a day.

OPIUM, BELLADONNA AND CHLORAL POISONING.

By P. J. FARNSWORTH, A.M., M.D.,
CLINTON, IOWA.

A hurried ring of the telephone: words come over the wire, "What shall I do for a woman who has taken an overdose of morphine?" The little girl who is studying primary physiology and the effects of alcoholic poison, answered promptly "give her an epidemic and some coffee."

She did not specify the epidemic 'grippe or scarlatina. An emetic and coffee is the stereotype recommendation for treatment in such cases, but if not applied at once is of little consequence. In most cases of poisoning the drug has been fully absorbed when we are called, and if morphine coma has set in an emetic would not act, or coffee be taken up, or even a stomach pump be of any service. This is true of the other alkaloids.

To begin with the case in hand. Opium is in most ways a complete physiological antidote of belladonna, atropine of morphine.

The text-books so classify them but direct its use in a cautious, hesitating manner as antidotes. We may better illustrate our meaning and use by this case: Mrs. L., aged 30, being seized with a paroxysmal pain in the stomach, received a hypodermic injection of ¼ gr. of morphine. The pain not being checked, on returning again, she took four or five of the hypodermic tablets from the vial that had been left, in all, one and a quarter grains. This was at 9 P. M. The pain and the patient became quiet. Sometime between three and four in the morning her friends were aroused by the strange breathing, and endeavored to wake her but without doing so. I was called and found the usual coma, contracted pupils, irregular and interrupted breathing, full pulse, skin pale and covered with cold perspiration. Every attempt to rouse her failed, such as dashing on water, slapping with a wet towel; and the galvanic current was ineffectual. These only started the respiration, which relieved for a minute or two the cyanosis, which was beginning to creep over the face.

A messenger was sent for tablets of atropine. While waiting for his return the respiration became more interrupted and reduced to five or six per minute, the pulse becoming slow and feeble. The rousing-up process was continued and artificial respiration was resorted to. Soon the atropine came, and one-fiftieth of a grain was injected into the arm, hot bottles were put to the feet and warm blankets over the body, artificial respiration kept up for fifteen minutes, when the dose was repeated in the other arm. In five minutes more the pupils began to open, and the breathing became a little more voluntary, warmth returned to the surface, and the pulse improved. In thirty minutes another injection of one-fiftieth of a grain was given. The pupils dilated very fully, respiration and pulse became regular and about normal, but the profound stupor remained; it was impossible to bring her to any consciousness. No other alarming symptoms being present this was deemed not to be dangerous, and no further attempt was made either to medicate or wake her up.

The sleep was a deep, quiet one; the patient was kept under observation and spoken to or the hand raised occasionally until about the next evening, she made some response. The urine was drawn off and she gradually came to consciousness. There was no ill feeling or nausea; in a little time the lassitude passed off and the patient was well.

In a case previous to this I was called in consultation where it was estimated the patient had taken four grains of morphine and a fifth of a grain of atropine. When called, the narcotics had been taken four or five hours.

The person was entirely unconscious and did not rouse in the least under any means used, the breathing and pulse a little accelerated, the temperature a little above normal, skin moist, pupils dilated. She appeared much like one profoundly under the influence of an anæsthetic. I advised letting her entirely alone waiting until the effects passed off. This was done and the stupor continued until the next day or as many as thirty hours. Consciousness then returned with no particular bad feeling following.

Another case in practice was from another source. At five o'clock in the afternoon I was called to see a lady of forty, rather of full habit, but of nervous temperament. Found her with flushed face and full pulse, in a half somnolent condi-

tion, moaning in an incoherant manner and occasionally screaming as if in intense pain, temperature normal. She had been in apparent health in the morning. It seemed to be a case of hysterics or violent neuralgia. I gave a hypodermic injection of ¼ gr. morphine. I subsequently learned she had taken a drachm of tr. opii a little while before.

The moaning ceased in a few minutes, a deep sleep followed, which soon passed into coma, from which it was impossible to rouse her. The respiration became peculiar (a shallow catch) which was reduced to six per minute, the skin was of natural color, the pulse full but weak, the temperature fell to 96°, anæthesia was complete.

On the floor beside the bed I discovered a bottle which had in it a few drops of a solution of chloral. The inference at once was that it was a case of over-dose of that drug though the symptoms were different from other cases I had seen.

Chloral acts promptly, in medicinal doses, as a hypnotic, where there is no pain. In severe pain it produces stupefaction but not sleep, even in large doses. The injection of morphine had quieted the pain and irritation and the large amount of chloral produced its anæsthetic effect. The shallow, catching, slow breathing, is not characteristic of chloral. I have seen it in one other case of chloral and morphine poisoning. Chloral alone gives a weak heart, but a soft shallow respiration and diminished temperature. Chloral and alcohol have other features, deep unconscious sleep, normal temperature, redness of the skin, temperature natural or above, pupils in either case slightly dilated, eyes watery. A large amount of chloral may not produce sleep; if pain is present, add to it a small dose of morphine and the sleep is precipitated and coma and anæsthesia.

At 6 P. M., my patient was in the condition described. I gave hypodermically $\frac{1}{60}$ grain of atropine. In about fifteen minutes this was repeated. The respiration soon became deeper and more frequent. I counted six, eight, ten per minute up to fourteen. I waited half an hour and gave another $\frac{1}{60}$ gr. Not long after this the respirations became nearly normal, the circulation steady, the pupils dilated, but the anæsthesia and sleep continued. A quantity of urine was drawn off, and she was allowed to rest, which continued until ten or eleven the next evening when she gradually woke up and came out of the stupor, not feeling very bad in any way. I then learned she had taken, from morning until the time I saw her, the vial three times full, each containing a solution of three drachms; and then a teaspoonful of tr. opii and my injection of ¼ grain morphine.

In another case four drachms of chloral were taken at once. The sleep was profound, the pulse slow and weak, the respirations regular but shallow, the temperature reduced. The person could not be roused and after four or five hours seemed sinking. A hypodermic injection of atropine was given (gr. $\frac{1}{60}$) this roused up the breathing and the heart, but the stupor continued twenty-four hours.

For the converse I have had few cases of atropine poisoning. A lady took three grain pills of extract of belladonna, by mistake for some cathartic pills. Dryness of the throat followed, giddiness and wild delirium, increased circulation, the scarlet rash, and severe pain in the stomach. Having some powders of morphine at hand she took four of them in three hours (over a grain). The pupils were widely dilated when I was called, the delirium was passing off, but the hallucination continued, especially if she opened her eyes. She was crouching in a dark closet with her best bonnet and cloak on, and for the rest her underclothes. She passed her urine freely. Half a grain of morphine was given and she fell into a quiet sleep, which continued until the next morning.

I was called about noon to see a little boy of four who had been suddenly attacked with some strange malady. He was hilarious then, covered with rash, his pupils widely dilated, he had some symptoms of spasms. The temperature was not high and the appearance of the eyes led me to suspect it was not scarlatina. I inquired what could the child have eaten. The mother recollected that a few days before some of the older ones had brought in from the alley two or three of the spring heads of "jimson weed" (*datura stramonium*). In the morning she had found the children playing with them and many seeds scattered on the floor. An emetic of ipecac was given, which brought up with the contents of the stomach numbers of the black seeds. The emetic was repeated and followed by a quarter grain of morphine, which produced quiet and a

long sleep out of which he awoke all right.

The elimination of these drugs is mainly by the kidneys, morphine slowly, atropine and chloral more readily. Their influence does not pass away until they have passed out. If the respiration and circulation become regular and sufficient the stupor may be disregarded; like an anæsthesia, it may continue with safety for an indefinite length of time. When the one drug is given to antidote the other the unconsciousness will be prolonged without danger. Sensation may be abolished but the functions of animal life continue unimpaired.

It may be difficult to determine the equivalent amount of either drug. If we put the ordinary dose of morphine at ⅛ grain we may give $\frac{1}{200}$ grain atropine. If four grains of morphine have been taken up we may give ½ grains of atropine; not all at once but up to that if necessary. Of atropine to chloral or that and morphine it could hardly be stated. When called to a case of poisoning with either of them the quantity injected is usually unknown. The judgment of the practitioner must determine the quantity required for the antidote. Begin with twice the medicinal dose and repeat at intervals, long enough for a proper effect to be observed. If it is for opium inject from $\frac{1}{100}$ to $\frac{1}{50}$ grain of atropine and repeat in fifteen or thirty minutes. The pupils will dilate and the respiration become regular, then let the case rest. If it is belladonna give morphine in ¼ gr. doses until the delirium is quieted and the symptoms improve. Give atropine in the same way for chloral. Atropine dilates and opium contracts pupil and dries up the perspiration; this serves as a guide in opium poisoning. Morphine will not contract the pupil dilated by atropine.

I have had no experience with many of the other alkaloidal poisons or with the phenol series. I feel very certain of success with the three mentioned; with the others I would experiment. Alcohol and chloral are the antidote for strychnia. Atropia might be tried with a probability of success in antipyrine or its kindred substances in the cyanosed state.

Since our toxicologies were written we have added a large series of soluble alkaloids and a new way of introducing them. We have only begun to understand the possibilities of hypodermic medication.

Not to forget the little girl's prescription of coffee. There seems to me not the remotest reason for giving coffee in opium poisoning except where an emetic has acted, it may be grateful to the stomach and stimulate the brain somewhat. Caffeine is a depressant to the heart and respiration, acting rather to increase than decrease the bad effect of the opium. It is said to produce death by depressing respiration. Coffee is a weaker sister of tobacco and produces the soothing, tranquilizing feeling in the same way that nicotine does. It is a diuretic and depressant.

TREATMENT OF DIPHTHERIA.

By C. C. MOORE, M. D.,
PHILADELPHIA.

In observing the death reports one cannot fail to notice the large number of deaths caused by this dreaded and alarming disease. This is proof positive that something is still wanting in the treatment; and any doctor that is apparently having success should report his plan of treatment.

I have either had a class of mild, favorable cases or my treatment is more successful than the majority of practitioners, if the Health Board statistics are worth their keeping. When I speak of diphtheria, I mean that contagious disease due to the specific poison: germ micrococcus diphthereticus and not any pseudo-membranous formation in the throat any place from tonsils to larynx, and due to some exposure or disregard of the laws of hygiene. Though follicular tonsillitis may resemble diphtheria in the beginning, it is never fatal and recovery begins in a few days. Some will object to the name follicular tonsillitis, but I think it names and describes this disease of the tonsils better than any other I have seen used. Membranous laryngitis or croup is very similar in appearance, but is due as I believe to an entirely different cause. The onset of diphtheria is sudden and alarming and the family or neighbors have it named before the doctor arrives, and great care will be required or a mistaken diagnosis will be made. We have no specific cure yet and diphtheria must be treated symptomatically. But we must throw away the old rule of treating symptoms as they arrive, and anticipate the symptoms, treating them before they arrive, or recognize them

and treat them before they rise very high, for right here will determine success or failure. The most pronounced and alarming symptom will be the inflamed and swollen tonsils, the inflammation soon extending to larynx and nares, interfering with respiration, preventing perfect oxidation of the blood and through this making a perfect field for the poison germs to multiply. Next to this is the fever which indicates the active chemical change caused by the amount of poison absorbed or the susceptibility of the patient to this particular kind of poison. The fever of itself is scarcely ever dangerous though I believe it proper to try to control it, and thus save the strength to tide over what would otherwise be a fatal case. It will also relieve a great deal of suffering.

After I decide it is true diphtheria I use the following:

℞ Tr. ferri chlor .....f℥iss.
Acidi. acetici dil. .....f℥iss.
Syr. limonis q. s. ad.....f℥ii.
M. Sig. f℥i. in aqua f℥i. Gargle; some may be swallowed and some spit out.

If the child is too young to gargle use a small brush and swab the throat thoroughly, then let the child have about two teaspoonfuls to swallow. The iron has an astringent effect on any inflammation of throat and mouth or mucous membrane; besides I believe it has some effect on the blood to modify the disease. The acetic acid has also a beneficial effect on the swollen mucous membrane of throat. The syrup of lemon is an excellent vehicle. You may use wine of cocoa, but it does not make as nice a mixture though the cocaine may exert some of its anæsthetic properties locally. The water you dilute with should be as hot as can be tolerated. A cathartic should be used to produce two or three stools daily; nothing serves this purpose so well as the following:

℞ Ext. cl. mit. [illegible].....grs. ii.
Sodii et pot. tart.....ʒi.
Sacch. alb.....ʒi.
M. ft. Chart. No. xii.
Sig. One every two to four hours as required.

This will prevent any of the membrane that has been swallowed from remaining in the alimentary canal.

If fever is sufficient to weaken and cause restlessness, then follow in the afternoon and night, to relieve and give quiet rest:

℞ Acetanalid .....grs. xii.
Morph. sulph.....gr. i.
Sacch. alb.....gr. i.
M. et ft. Chart No. xii.
Sig. One every three hours if needed. The dose to be varied to suit the age and strength of the patient.

The acetanalid is to reduce fever, the morph. sulph. to get rest, and I think it also helps to reduce temperature. If the nares become involved, the following for insufflation will be beneficial:

℞ Sulphur.....
Iodoform.....
Bismuth subnitratii.....
āā ʒi.
M. Sig. Use with powder-blower in mouth and throat.

I believe all of these powders have a germacidal effect and also will help to remove any accumulation in the nose and throat. If the secretion accumulates in nose use a flexible wire probe and cover the end with absorbing cotton and swab out the nostrils until clear of any membrane. If the nose and lips become excoriated from the discharge, use a few drops of fluid cosmoline in the nose. This two or three times daily gives great relief.

I have used these prescriptions in a number of cases and so much confidence have I in them that I almost consider them specific, along with careful attention to the condition of the room, which should be kept of an even temperature of 75° F. This is warmer than proper for most patients, but I believe that in inflammations of respiratory tract the patients should be in a warm room; also, if room can be moistened with steam it will be of great advantage, but at same time do not forget to secure perfect ventilation.

For food, the most nourishing will be required, usually it should be liquid; rich, pure, unskimmed milk is first on the list. Skimmed milk is useless for every purpose. Next is the beef tea which so many physicians condemn, but when milk is refused or does not agree the tea will do well. You may change this for soups and broths. Take at regular intervals and be careful to not over-feed. Well-baked bread or crackers may be used also. If the strength begins to fail use stimulants, either whisky or brandy, and quite freely, which will often tide over the crisis.

I have followed this course in a number of cases and thus far successful in all but one and that one did well until the kidneys became involved and he died from acute parenchymatous nephritis. I will speak of after-treatment, which should be care from exposure to changeable weather, and to over indulgence in food. Most cases will be benefited with tonics for a while and the iron salts will be preferable. The most common and troublesome se-

quelæ will be abscesses of the middle ear, and this should always receive prompt and careful attention. The attendant should be always cautioned to watch for symptoms of ear-ache. Too often the little one will cry for days and the nurse will chastise it for being cross and spoiled after its former sick-spell when the child will be relieved by a discharge from the ear. The family will think because they can not see the abscess it does not need attention. Some even claim it to be a sign of health. Paresis and albuminuria are the two next common results and when the child does not begin to gain flesh after this disease, local paralysis and nephritis should be examined for.

I will finish this paper with a report of two cases I saw the same day, one of which was the only fatal case from diphtheria I ever had, and this was due to the after-following nephritis:

12–14–'91, S. A., æt 5 years, white.—A very delicate looking child. The first visit found the child with all of the cerebro-spinal symptoms of La Grippe of '91 and '92. Temp. 101°, pulse 110. Some discharge from nose, pale, anæmia, no patches in throat though I looked carefully for diphtheria, as there were several cases reported in the neighborhood. The tonsillar arches and pharynx were swollen and red. The following:

℞ Hydrarg. chlor. mit.....gr. ii.
Sodii et pot. tart.....5i.
M. ft. Chart. No. xii. Sig.—One every hour until catharsis.

I used the sulphur locally in powder, because I felt suspicious of what followed and thought it would assist the calomel in its action, fluid cosmoline to be dropped in the nose with an eye dropper.

12–15–'91, It is a plain case of diphtheria with typical patches on tonsils developed since yesterday. (I must not forget to mention the child had just recovered from a severe attack of measles. The rash had left him about seven days.) Temperature 103°. pulse 120, respiration 30; very sick looking. He was isolated to an upper room and the following:

℞ Tr. ferri chlor.....f 5i.
Acidi acetici dil.....f 5i.
Vini cocæ.....q. s. ad. f 5 ii.
M. Sig.—f5i in aqua f5i. Swab the throat every four hours and give f5ii of the dilution to swallow.

℞ Spr. frumenti.....f5i.
Every two hours, using plenty of water with it.

The powders from previous day had acted kindly, and were continued.

12–16–'91. Abnormal conditions increased from yesterday, but nothing alarming. The anterior cervical glands were very much swollen and tender. To take the place of first powders the following was prescribed.

℞ Sulphur.....
Iodoform..... āā 5i.
Bismuth subnitratii.....
M. Sig.—To be used in powder blower, and nose and throat covered with it.

12–17, Glands on each side of neck more swollen; left side most. Temperature and pulse same; very restless.

12–18, Doing tolerably well. Took more nourishment.

12–19, Temperature 101°, pulse 130. Croupy cough indicating œdema of rima-glottidis; respirations 46. 10 A, M: thought this would be a fatal case and told the parents so. 12 M. ℞. H_2O_2 locally, full strength of Chas. Marchand's, cleared all false membrane and respirations improved. I stopped the former gargle and used H_2O_2 at 3 P. M. took some nourishment and slept, but breathing very hard. Muscles of chest working as in true croup. Child held his own for remainder of day by using H_2O_2 when any membrane loosened.

12–20. Weakening, and breathing extremely difficult. Medicine as day before.

12–21. Patient failing in every way.

At 8 A. M. respiration 44, pulse 130; at noon, respiration 48, pulse 136; at 3 P. M., respiration 56, pulse almost imperceptible. The case was getting desperate. I promptly went for one of S. S. White's oxygen apparatuses, 40-gallon capacity, and at 5.30 P. M. commenced to give him a constant stream of pure oxygen. He was very much cyanosed, respiration 56, and very difficult. The oxygen was half wasted, but patient too weak to resist and I passed the tube of inhaler well back in pharynx. The constant stream from cistern of oxygen soon supplied the deficiency and the blue color began to clear up and breathing was improved. For fifteen minutes this was continued, when respirations were 44 and the child was able to cough and raised a mouthful of muco purulent membrane, From that time on he improved and at 10 P. M. was resting; color better; respiration 36, easy, and quite natural; pulse 108, and perceptible at wrist. Had calomel to-day and bowels moved freely but very painful micturition; gave the oxygen for five minutes and he

took it kindly. This increased his strength and more phlegm was expectorated.

12–22. Doing well; took nourishment and was urinating better, but no albumen. From this on he made slow recovery.

12–27. Eating well and he got the following:

℞ Elixir phos. ferri. quin. et strych.
Sig. f3i. Four times daily.

In this case I had to deviate from my routine treatment, but this digression I described in full. He got water and whisky all of the time, some days a little beer was given. One favorable symptom throughout was the temperature, which never was above 103° and he got no antipyretic.

1–14'–92. Doing well in every way.

With my other patient I was not so successful, but will give the history, as so many report their successes but not their failures, and this is my only death directly or indirectly from diphtheria. I was called the same day as my first case called me, and the two were cared for at same time.

12–14–'91. C. C., æt 6, white. A pale strumous child of not very healthy parents. I saw the child four months previous. He then had hypertrophied tonsils and a chronic naso-pharyngitis, for which I treated him once and told the mother that diphtheria would almost certainly be fatal with him. She only brought the boy once as he did well and would not submit to having the tonsils removed as they should have been and as she was advised.

When I examined the child I found the temperature, 103°; pulse, 110, weak and compressible, and a very sick appearance from a well developed diphtheria. He had been seen the day before by a drug-store doctor, who pronounced it a sore throat and gave a fever mixture and some ointment for enlarged glands on both anterior cervical chains. I do not approve of any rubbing for these enlarged glands of diptheria, as I believe the poison is readily scattered throughout the system. No symptoms alarming, but the strumous constipation. He was ordered a hot bath and put to bed. Ordered fld. cosmoline for excoriated nostrils and

℞ Hydrarg chlor. mit.....gr. ii.
Sulphur .....3i.
M. et ft. Chart. No. xii. Sig.—One every three hours.

To be taken dry that it might lodge in throat, and also, after passing further, increase action of bowels, for this was necessary.

12–15–'92.—Medicine acted well; temperature, 101½°

12–16–'92.—Doing well; taking liquid nourishment. Temperature and pulse as usual.

℞ Tr. ferri chlor.....f 3 i.
Acidi acetici dit.....f 3 i.
Syr. limonis.....q. s. ad. f3ii.
M. Sig.—f3i in aqua f3i. Gargle.

This boy could gargle quite well.

12-17.—About as usual.

℞ Sulphur,
Iodoformi āā3i
M. Sig.—Use locally with powder-blower.

12-19.—Doing well apparently, R H_2O_2, locally removed all necrotic tissue.

12-20.—No bad symptoms, the diphtheretic patches had all disappeared and the tonsils were sloughing out, a process I thought rather favorable. He had a hoarse, croupy cough.

12-21.—Appetite failing, also strength. The tonsils were kept clear of pus and sloughs.

12-23.—No fever, pulse normal but very feeble.

12-24.—Bowels not acting.

℞ Magnesii citratis solution.....
Sig. f3i every hour.

I was suspicious of kidney trouble for quantity of urine was small and stomach was turned against food.

12-25.—Doing well; medicine from day before had acted well.

12-26. Throat very red again; slough removed from tonsils.

12-29.—Same for three days, urine examined and found half albumen as it settled after boiling. At this stage I thought a tonic was needed and ordered f3i of Syr. Hypophosphites comp., every four hours and all other medicines stopped. Tried to get him to take skim milk for a few days but the stomach refused it, my usual result from this exclusive diet. Was given a hot bath that brought out a very nice perspiration.

12-30.—About the same. The skin was moist.

12-31.—Face and feet œdematous for the first, and a fatal prognosis given the family.

1-1-'92.—Urine full of albumen, hot baths did well.

1-2-'92.—Taking food, better.

1-3-'92.—Same as last few days but refusing food.

1-4-'92.—Same but weakening.

1-5-'92.—Not so well, painful micturition and ammoniacal odor quite perceptible.

1-6-'92—Failing, odor increasing, urine boiled thick like white of egg.

1-7-'92.—Very weak at 10 A. M., stomach refusing food and medicine, and kidneys not acting at all. Ordered Bassham's mixture, which the stomach promptly ejected. He failed rapidly and died at 10 P. M. No autopsy allowed. I do not know if he had albumen in urine before diphtheria or not. The long continued sloughing of tonsils should have been prevented by having them removed long before taking sick. I might have tried pilocarpine when the kidneys began to fail, but do not think any good would have come from it. These are the only two cases where I deviated from my usual routine treatment and this was to try to avoid symptoms that arose.

PUERPERAL PERITONITIS TREATED BY HYSTERECTOMY.

The *Archives of Gynecology, Obstetrics and Pediatrics*, March, 1892, contains an abstract of a case reported by Dr. A Lapthorn Smith (*American Journal of Obstetrics*), in which a partially retained placenta gave rise to peritonitis, preceded by a chill and temperature of 104° on the third day. The symptoms were urgent, and palliative treatment gave only temporary relief. On the fifth day abdominal section was performed and the uterus removed, the stump being drawn into the lower angle of the abdominal wound and covered with boracic acid. No drainage was employed; the stump turned black on the twelfth day; the temperature fell from 105° before the operation to normal on the fourth day, and the convalescence was uneventful. The following conclusions are drawn:

In confinement cases the temperature should be taken daily, and if there be any fever, vaginal douches of permanganate solution should be given; if the temperature does not speedily fall after such measure, the douche should be made intrauterine.

If there is no improvement in a day, curette, irrigate and apply tincture of iodine to the cavity of uterus.

If these measures fail and peritonitis develops, perform an exploratory incision, and if there is no other evident source of infection, remove the uterus.—*Univ. Med. Mag.*

Society Reports.

THE CLINICAL SOCIETY, OF LOUISVILLE.

Stated meeting, May 24, 1892.

Dr. I. N. Bloom, Vice-President, in the Chair.

GUN-SHOT WOUND OF KIDNEY.

Dr. W. C. Dugan: I have a specimen of gun-shot wound of the kidney, that I would like to exhibit. The organ was removed fourteen hours before death. Last Saturday night I was called by telephone to the City Hospital to see a man that had been shot. I requested the House Surgeon to ascertain the condition of the patient, and he said the man was in fairly good condition, having walked up to the ward. I asked him to go back and ascertain, if possible, if he had been shot through into the cavity, and whether there was great loss of blood. He again telephoned in about twenty minutes, reporting that the patient was growing rapidly worse, pulse becoming rapid and feeble. I hastened to the hospital and made an examination; found the patient almost pulseless, complaining of thirst, and had every evidence of great loss of blood. On examination it was found that the ball had entered just between the eighth and ninth costal cartilages. Of course from the range of the ball, the liver could hardly have escaped. The abdomen was opened and a large amount of coagulated blood removed, and it was found that the patient was still bleeding. I then examined the liver and found that the ball entered its lower surface posterior to the transverse fissure, and, on further examination, it was found that the kidney was wounded. The location of wound of liver placed it beyond surgical procedure. The kidney was lifted up and was found to be bleeding freely, and I will state the ball passed through it near the pelvis necessarily wounding large vessels. We decided to do a nephrotomy, so ligated the vessels and removed the organ, all being done in a few minutes. The patient died of shock in fourteen hours. Post-mortem showed that there was no hæmorrhage after the operation. I deeply regret that we neglected to practice transfusion.

Dr. W. O. Roberts: I would like to ask Dr. Dugan how long after the man was shot before operation was performed, if there was any intestinal wound, and, whether or not there was any bloody urine.

Dr. W. C. Dugan: I saw the patient about two hours after he received the shot. There were no intestinal wounds. The nurse told me that there was blood in the urine the following morning.

Dr. W. O. Roberts: Dr. Dugan did, in my opinion, just exactly what ought to have been done, under the circumstances.

OPERATION FOR CONGENITAL PTOSIS.

Dr. T. Evans: I wish this evening to exhibit a case upon which I operated two years ago. This child was brought to my office in May 1890, the subject of congenital ptosis. There was entire absence of the levator palpebra muscle, with great flattening of the ossa nasi and well marked epicanthus. In order to look at objects even a little below the horizontal meridian, she had to throw the head backward, distort the face by tension of the orbiculars oris, zygomatici and other facial muscles in her efforts to widen the palpebral commissure; depressing the occipito-frontalis scarcely made an impression on the superior lid. The movements of the globe were normal, and the vision was apparently perfect. As the father was accordingly anxious to have something done, I decided to perform what is known as Pauvs' operation, which was done by making an incision from one canthus to the other, interrupted in its middle for about one-third of an inch; this incision followed the furrow of division between the tarsal cartilage and the orbital portion of the eyelid. A horizontal incision with a slight convexity upward and about three-quarters of an inch in length was then made, just over the orbital margin, passing down to the periosteum. Then, by two short vertical incisions through the integument, this incision was joined to the first incision at the border of the tarsus. Still another horizontal incision was made along the upper border of the eyebrow, deep enough to extend to the periosteum, and about an inch in length; then, the little peninsula of skin marked out by the middle, lower and vertical incisions was dissected from the tarsus down almost to its ciliary margin. Then the bridge between the two horizontal incisions was undermined and the peninsula of skin from the lid passed under the brow and securely stitched to the superior lip of the upper incision. I operated on one eye at a time, with interval of about one week between the operations. The wounds were dressed with collodion and iodoform without bandages. The object of the operation is to have the occipito-frontalis assume, as far as possible, the function of the missing levator palpebra muscle, without interfering with the closing of the lids. She has, as you see, pretty good control of the upper lid by the action of the occipito-frontalis, and no longer distorts the face in her efforts to depress the inferior lid.

She has been in school for the past year, and has no trouble in keeping up with her classes. The only disfigurement from the rather extensive operation is the small pit under the brow, where the slit of integument was passed through. A few hairs persistently grow from this opening. This is the only case in which I have attempted this operation, in fact, the only time I have ever seen it performed. While the result has not been perfect so far as correcting the deformity is concerned, the improvement has been so marked as to regard this as the most rational and the successful of the various operations that have been devised for the relief of this peculiar, and distressing deformity. If I have occasion to again perform this operation, I should modify it by making my superior or horizontal incision higher and nearer to the meidan line, and, also, make the dissection and insertion of the flap nearer the median line, thereby getting a closer connection between the superior lid and the more athletic portion of the occipito-frontalis muscle. I should also be more careful in removing the hair bulbs from the end of the flap before passing it under the brow. For the epicanthus I followed Arlt's method of excising a triangular piece of the fold on either side of the nose. The epicanthus and flattening of the nose generally disappear to some extent as the child develops. In this case there has been very considerable development of the parts since she has been under my observation.

I regret that I did not secure a photograph of the case before the operation, but the deformity was so great that the par-

ents very naturally objected to having it photographed.

Dr. J. W. Irwin: The case is a very interesting one, but Dr. Evans' prognosis as to the ultimate use of the eye, is not quite as favorable as a case I have in mind.

Two years ago, a patient of mine, a young man, fifteen years of age, had congenital ptosis of one eye. He could scarcely open the lids at all; could see the ground and nothing more.

He was operated upon by Dr. J. H. Ray two years ago. The operation he performed was cutting through the skin down to the tarsal cartilage, then transfixing the lower flap with a silk ligature, and carrying the ligature up subcutaneously, and bringing it out at the insertion of the tendon of the occipito-frontalis muscle, just above the eyebrow. The sutures were allowed to remain until they cut their way out, with the effect of producing a very marked immediate result. The line of the cicatrix seemed to be buried; that is, so the upper flap came down over the top of the lower one a little, the lower was very much shorter than the one made by Dr. Evans.

The union, in that case, to the occipito-frontalis seemed to be very perfect, and the immediate result everything that one would expect, but within the last two years, that result has improved. The patient can now see straight before him.

Dr. S. G. Dabney: I have never seen the operation referred to performed, and have had only one case where I advised such an operation, and, in that case, the family decided to postpone it until the child became older. The paper read by Dr. Evans is very interesting, and we can all see the benefits the child has received from the operation performed. I think there will be still further improvement as the child grows older.

Dr. T. C. Evans: I will say that the child has improved steadily since the operation. One reason for doing the operation early was that she was absolutely unable to go to school. I think by the time she is twelve or thirteen years old, the epicanthus will have almost entirely disappeared, and the development of the nasal and frontal bones, will still further lessen the deformity.

A CASE OF ABDOMINAL TUMOR.

Dr. W. R. Wathen: I will report a case upon which I operated recently:

Miss P., Ashland, Ky., aged twenty-six years; has been stout until six months ago; then had a feeling of weight and some pain on the left side of the abdomen, and detected a small enlargement. She thinks the enlargement began just below the short ribs, but her physician afterward examined her and thought it began lower down. It gradually increased and she began to lose flesh rapidly; but at no time had any fever, nor was there any disturbance of the function of the kidney or any abdominal viscera.

For three months the tumor could be traced from the short ribs to the pelvis, and the left buttock was enlarged to twice the size of the right. The uterus was retroverted and the tubes and ovaries were bound down by adhesions, but the tumor could be felt through the vagina. It was nearly immovable, and by palpation and percussion the outlines showed that it extended from under the ribs to the pelvis, and within one inch of the mesial line. It caused lateral bulging of the abdomen, was apparently cystic, but percussion in front of the anterior superior spinous process of the ilium did not exclude the possibility of an intervening bowel. A laparotomy was done at Ashland, May 8, 1892. As it was impossible to tell the nature and conditions of the tumor, and its relation to the bowels or other abdominal structures without an exploratory incision, the abdomen was opened in the mesial line; the adhesions of the tubes and ovaries were separated and the uterus lifted out of the sacral cavity. The tumor was extra-peritoneal and the wall protecting it from the peritoneal cavity was thick and extensively adherent to the omentum. It extended from a little below the peritoneal line in the pelvis to above the kidney, but that organ was not involved. Posteriorly it extended to the spinal column, and anteriorly to midway between the iliac bone and the mesial line. The abdominal wound was closed and a vertical incision two inches in length was made an inch in in front of the anterior superior iliac spinous process. A half gallon of inodorous, thin, milky-looking liquid was discharged, the nature of which it was not possible to tell without a microscopical examination, which could not conveniently be done. The cavity extended further than the finger could reach below and above. There were some connecting bands which were broken, but the general con-

ditions were not such as are usually found in a pus cavity. It was evidently some kind of extra-peritoneal cyst, the cause and nature of which I do not know. The cavity was thoroughly irrigated with a bi-chloride of mercury solution, and some matter the appearance of brain substance washed out. The gum drainage tubes were sutured in the angles of the wound, one dipping to the bottom of the sac and the other going up to the kidney. The cavity was irrigated twice daily with the mercury solution, but only a little drainage except the liquid injected was noticed, and there was no pus. After a few days there was no discharge, and the water injected came away clear. The cavity is contracting rapidly, and will probably soon be obliterated and the wound closed. The operation was followed by no untoward symptoms; her pulse and temperature remaining about normal. The bowels moved freely in forty-eight hours without medicine, and each day since. She ate heartily after this, and is gaining flesh and strength.

Dr. W. C. Dugan: There are two peculiar features in regard to Dr. Wathen's case: first, the inability to feel the tumor from the vagina; and second, the œdema on the left buttock. I recall a case very much like this, presented by Dr. Prudden to the Pathological Society of New York City about seven years ago. It was a post mortem tumor.

Dr. W. H. Wathen: I had never seen the case until about an hour before the operation; in interrogating the lady and her physician as to the history, I could find no evidence of any kidney complication, or disturbance of any organ of the body. In answer to the inquiry of Dr. Dugan as to the inability to feel the tumor through the vagina, would state that the tumor may have extended a little below the rim of the pelvis; she was a large woman, pelvis very deep; cannot state positively whether it did or did not, but the œdema on the left buttock was evidently the result of pressure of this accumulation interfering with the circulation. I did not see the patient after the operation, but left my nurse with her for a week, and she explained upon her return that within two or three days there was practically no œdema on the buttock, and she was positive these was nothing in the liquid discharged after I left the case that indicated pus, being at the second day almost clear, and after two or three days the dressings were hardly soiled, and when water was injected through the tube, it came away just as it went in. I know nothing about the pathology of this cystic accumulation, and had no way of saving any of it so as to have a miscroscopical and chemical examination made. Had the operation been done here, I should have saved some of the material and had a carful examination made. There was no odor whatever.

Dr. T. Satterwhite: I would like to ask Dr. Wathen how long the bi-chloride injection was used, and at what strength.

Dr. W H. Wathen: It was used several days, and at a strength of 1/5000.

FRACTURE OF ANTERIOR SUPERIOR PROCESS OF ILIUM.

Dr. W. O. Roberts: One week ago last Friday, I was called to see a patient about nineteen years of age, whom I found lying on the floor with his right leg extended and rigid, and seemed to be suffering a great deal of pain. The history of the case, as related by bystanders, was that this boy while running a foot race was suddenly caught with his leg backward, and could not move it. He called for assistance and was carried into a neighboring house where I saw him. He was put under the influence of chloroform so a thorough examination could be made, and I found a fracture of the anterior spinous process of the ilium. This is a very unusual case and I never heard of a fracture in this locality caused by muscular contraction, which must have been the case in this patient. The only two muscles going to the limb from this special point are the tensor vaginæ femoris, and the sartorius,

Dr. T. C. Evans: I would like to ask the size of the fractured piece that was pulled away.

Dr. W. O. Roberts: About the size of your thumb.

RECURRING APPENDICITIS.

Dr. W. C. Dugan: A gentleman about twenty seven years of age came to me from Indiana to-day, with a history of colicky pains for fourteen years. He is confined to his bed about once or twice a month for two or three days. He is in pretty fair condition, and able to work some of the time, but always complains of pain in his right iliac region. There is little, if any, en-

largement. I made diagnosis of appendicitis (recurring) and want to know if this is a case in which an operation is called for. I am inclined to think it is, and have advised the patient to have it done without delay. It is especially important that this be attended to for these cases all sooner or later terminate in perforation, and this man lives many miles from a surgeon. If he lived in a city it would be much less urgent, for, if perforation, should occur, he could summon his surgeon at once, but not so as he is located far in the country.

DR. J. G. CECIL: It seems to me that the case is old enough to demand an operation, and I think Dr. Dugan would be justified in making a thorough examination.

DR. L. MCMURTRY: From Dr. Dugan's brief account, the indications are that he has a case of recurring appendicitis, and I think the case is one that can only be cured by the radical operation. The history of these cases is that they eventually end in perforation. If let alone, no one can tell whether the next attack will be the perforative attack, and an operation is much safer now than it will be at any time in the future.

DR. W. O. ROBERTS: I think this is a case where an exploratory operation should be made; there would be comparatively little risk in this, and if appendicitis is found to be the trouble, of course, it will never get well until an operation is performed.

DR. W. H. WATHEN: An exploratory operation made in the median line would be attended with but little danger, and I think Dr. Dugan would be justified in making it, if he did nothing further than to detect disease of some internal organ, whether it be removed or not. Then, if the appendix is diseased, and is found to be bound down by adhesions, it could be taken care of. I should make an incision, not over the appendix, but midway between the umbilicus and the pubes.

DR. W. C. DUGAN: I do not agree with Dr. Wathen in regard to the location of the incision. I would prefer the right iliac region, as the trouble seems to be located in that locality. An incision could be made long enough to explore the right side of the cavity to ascertain whether the trouble was appendicitis or not, and if that should be found in a normal condition the entire cavity could be examined through the same incision.

Selected Formulæ.

ULCERATED CHILBLAINS.

Dr. Brogg recommends for ulcerated chilblains:

℞ Acid. carbol.....*m* xv.
Ung. plumbi.....3 v.
Lanolini.....3 v.
Ol. amyg. dulc.....3 ss.
Ol. lavand.....gtt. xx.
M. S.: Apply two or three times daily.

ECZEMA OF THE VULVA.

Dr. Lusch (*La Médecine Moderne*, 1891; *Le Progrès médicale*, January 2, 1892) speaks highly of the following lotion:

℞ Bicarbonate of soda.....gms. 8 (3ij).
Bicarbonate of potash.....gms. 4 (3j).
Neutral glycerine.....gms. 6 (3jss).
Tincture of opium.....gms. 8 (3ij).
Water.....gms. 250 (fl. 3viij).
Apply mornings and evenings.

After applying dust on:

℞ Powdered starch.....98 parts.
Powdered camphor..... 2 parts.

CARE OF THE TEETH IN DIABETES.

Dr. Dujardin-Beaumetz says diabetics should care for their teeth and gums with the utmost attention. The following formula for a dentifrice has given him the best results. It is to be diluted one-half at time of using, and should be used twice daily:

℞ Acid. boric.....25 grammes.
Acid. phenic..... 1 gramme.
Thymol. .. ..0.25 centigramme.
Aquæ..... 1 litre.

To this is to be added:

℞ Essence menth.....gtt. x.
Tinct. anisi.....10 grammes.
Cochineal.....q. s. to color.
Alcohol.....100 grammes.

HEADACHE.

In neuralgia cephalagia, and in the early stage of la grippe, when the patient complains of pains and aches from head to foot, the following has answered admirably. It also causes a reduction of temperature in la grippe:

℞ Quininæ sulph.....gr. ix.
Antipyrine.....gr. xviij.
Ext. hyoscyami..... gr. iij.
M. Ft. capsul. No. vj. Sig.—One capsule every two or three hours.

HEMICRANIA.

Dr. Schultins (*Centralblatt für d. ges. Therapie*, No. 12, 1891; *Lo Sperimentale*, No. 23, 1891) gives the following in migraine:

℞ Phenacetin..... .....dgms. 3.
Sodio-salicylate of caffein.....mgms. 15.
Muriate of quinine.....dgms. 2.
Muriate of morphine..... .....mgms. 5.
Semarine.....mgms. 1.
Butter of cacao, q. s.
Sufficient for one capsule. Make thirty such capsules.

THE TREATMENT OF WHOOPING-COUGH.

According to the *Bulletin Générale de Thérapeutique*, Galvagno has employed antipyrin combined with resorcin in the following formulæ in the treatment of whooping-cough in children:

℞ Distilled water.....f ʒ iiiss.
Resorcin.
Antipyrin.....āā gr. xv.
Hydrochloric acid.....gtt. x.
Syrup.....f ʒ i.

Or,

℞ Syrup of acacia.....f ʒ iiiss.
Resorcin.
Antipyrin.....āā gr. xv.
Syrup.....f ʒ i.

Sig.—Of this, 3 to 5 dessertspoonfuls are given each day.

Under this treatment the duration of the disease, according to the author, does not exceed twelve days.

INFLUENZA.

The following is said, by Dr. Devereux Long, to have given more satisfactory results in the treatment of influenza than any of the more commonly employed remedies:

℞ Spirits of camphor.
Comp. tinct. of lavender.....ʒ ij.
Spirits of chloroform.....ʒ j.
Mucilage of tragacanth.....ʒ j.
Distilled water.....ʒ iij.
M. Sig.—Tablespoonful every four hours.

—*British Medical Journal.*

AN OINTMENT FOR USE IN BURNS.

According to Siebel, of Elberfeld, the following ointment is an excellent application in all cases of burns. It is much to be preferred to iodoform, not only on account of the absence of the penetrating odor of the latter, but mainly on account of the analgesic action of the europhen, and the property which it possesses of diminishing in a marked manner the secretions of wounds, thereby allowing the dressing to remain intact for three or four days. The formula is as follows:

℞ Europhen..... 3 grammes (gr. xlv).
Olei olivæ..... 7 grammes (gr. cv).
Vaselini.....60 grammes (ʒ ij).
Lanolini.....30 grammes (ʒ j).—M.
Sig.—For external use.

—*La Semaine Médicale*, suppl., March 9, 1892, p. li.

SWEATING FEET.

Dr. Rabow (*Therapeut. Monatshefte*, No. 10, 1891) dusts the following powder into the shoes and stockings of patients suffering from profuse sweating of the feet:

℞ Acid salicylic.....
Alum.....
Pulver. oryzæ.....
} āā gms. 10.

ACUTE NEPHRITIS.

For acute parenchymatous nephritis following the puerperal condition in a young married woman, aged twenty-seven years, Prof. DaCosta prescribed the following:

℞ Tinct. belladonnæ.....gtt. iij.
Tinct. digitalis.....gtt. x.
Liq. potassii citratis.....f ʒ ij. M.
Sig.—Three times a day.

Apply dry cups over the kidneys and also counter-irritation over the kidneys with croton oil. The patient was directed to stay in bed for two weeks and her diet to be absolutely of milk, the kidneys to be kept washed out by drinking plenty of water or by using any mild diuretic.

—*Coll. and Clin. Record.*

STYPTIC FOR BLEEDING GUMS.

Viau recommends the following styptic for bleeding gums after the extraction of teeth:

Chloroform .....60 grs.
Tannic acid .....30 "
Menthol.....30 "
Tincturæ krameria..... 1 fl. oz.
Distilled water.....16 "

—*After Pharm. Centralb.*

BRANDRETH'S PILLS.

Dr. D. S. Clark (*American Druggist*) says the following is the formula:

Take of
Extract colocynth.....1 scruple.
Aloes, socotrine.....2 drams.
Gamboge.....1 dram.
Castile soap.....½ dram.
Oil peppermint.....2 drops.
Oil cinnamon.....1 drop.
Powd. arabic and alcohol, of each sufficient quantity.
Mix and make eighty pills.
Dose: One to three as directed.

ASTHMA.

℞ Pulv. stramonii fol.....ʒ i.
Potass. nitrate.....ʒ iv.
Sem anisi.....ʒ ii.
M.—Ft. pulv. No. i.
Sig.—Monld into cones āā ʒ ss, burn on plate and inhale fumes; may add opium, tannic acid, etc., if thought uecessary.

PRURITIS.

The following (*Le Progrès Médical*, No. 49, 1891) is praised:

℞ Menthol.....gms. 4 (ʒ j).
Alcohol.....gms. 30 (fl. ʒj).
Aquæ.....gms. 60 (fl. ʒ ij).
Acid acetic.....gms. 150 (fl. ʒ ivss).
Apply with a sponge.

CHRONIC ECZEMA.

In a child three years of age, Dr. Henry W. Stelwagon (Clinical Lecturer on Skin Diseases) prescribed the following:

℞ Unguent picis liquid.....ʒ j
Unguent. zinci.....ʒ vj.—M.
Apply locally.
The child must be given cod-liver oil, and its diet should be of plain, nourishing food.

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Leading Articles.

LYSOL IN GYNÆCOLOGY AND OBSTETRICS.

It must be confessed that but few if any drugs fully answer the requirements demanded of them. The majority either lack in efficacy or possess such toxic properties as to render them dangerous. Again, those that are useful and comparatively innocuous in therapeutic doses frequently leave us in the lurch just at such times as we most need their aid. So is it with antiseptics. The best are the most dangerous; the least poisonous are the least efficacious. Out of the long list of antiseptics at present in use we must regard corrosive sublimate, carbolic acid and creolin the most important in gynæcology and obstetrics. But even these are for various reasons far from being ideal antiseptics.

The requirements of such an antiseptic would be, as nearly as we can hope to realize them, as follows:

1. It must be easily soluble in water, and making a transparent solution.

2. Even in weak solutions it must act as a speedy and positive germicide.

3. It must be very slightly if at all poisonous to the human organism.

4. Its price must be reasonable enough to permit of its general and free use.

5. It should have freedom from offensive odor.

In what way does lysol answer these requirements?

In the first place it is soluble in water in all proportions. The second proposition has been answered by the results of the investigations of Schottelius and Gerlach. They state that they have found solutions of ⅓ per cent. of lysol, 5 per cent. of carbolic acid, and 2 per cent. of creolin to be of equal efficacy as germicides. In creolin, however, the uncertainty of its composition renders positive experiments impossible. But the most recent investi-

gations regarding the comparative strength of antiseptics show that the antimycotic actions of carbolic acid and lysol are equal, and two or three times more active than creolin. Of course, as regards germicidal strength, bichloride of mercury always takes the lead, but on account of its dangerously poisonous and irritating properties should be replaced by an effective safer germicide, especially for general use.

From the experiences of investigators abroad, and especially from the results obtained from at Dr. Martin's Institute in Berlin, where the drug has been extensively tested, we are inclined to think that lysol is a near approach to an ideal antiseptic for gynæcological and obstetrical practice. A most important contribution in this connection is an article by Dr. Pèe in one of the last numbers of the *Duetsche Med. Wochenschrifte*, which we freely draw upon.

The generally accepted and extensively used method of an aseptic cleansing designed by Fürbinger necessitates a rather cumbersome apparatus—the washing and brushing with soap and water, rinsing with 80 per cent. alcohol, and the subsequent scrubbing in a 2 per mille solution of bichloride of mercury—three wash basins are required besides the necessary solutions, etc. In the often limited quarters of the lying-in room this paraphernalia is likely to prove very inconvenient. When we find that in a 1 per cent. solution of lysol, we have an antiseptic that will render the hands of the operator, the instruments and the parts aseptic, at the same time a solution that can be made in any quantity with the greatest ease, we have surely gained something, against which the slight objection of slipperiness of the solution need scarcely be considered.

Regarding the toxicity of lysol, Gerlach, Remochamps, and Sugg, although experimenting separately, have arrived at the same result. The minimal fatal doses for each kilo of body weight are as follows;

For carbolic acid.....0.3 grammes.
" creolin.....1.1 grammes.
" lysol.....2.3 grammes.

To express this in other words: carbolic acid is eight times more poisonous than lysol, and creolin twice as poisonous as lysol.

These facts have been amply proven by the results of laparotomies, in which the merits of the drug have been clearly proven. Michelsen flooded the entire abdominal cavity with a ⅓ per cent. hot lysol solution, and did not observe even the slightest symptoms of poisoning. The same writer states that when using the solution of this strength for instruments, sponges, etc., most excellent results were obtained; the reaction of the peritoneum was remarkably slight, and rapid, uninterrupted healing occurred, so that the patients were able to leave the hospital within two weeks. The weak lysol solution has the advantage over sterilized water or the normal salt solution in that while being equally harmless it may abort a pre-existing infection. According to Pée, the only symptoms of irritation following the use of 1 per cent. solution of lysol were slight burning and itching of the skin.

The price of lysol is about one-fourth that of carbolic acid, and considering that a 1 per cent. lysol solution answers the same purposes as a 5 per cent. carbolic acid solution, the comparative prices of these solutions would be as one to twenty, in favor of lysol. This is a very important feature, especially in hospital and dispensary work; and the odds in favor of lysol are still further increased when we consider the comparative poor solubility and dangers of carbolic acid.

Dr. Pée reports that in the Berlin Obstetric Clinic lysol has been used in about 550 cases, including 300 cases of childbirth, 200 abortions, and the rest lacerations of the perineum, etc. In twenty-three cases of septic abortion, a removal of the septic matter followed by the use of a 1 per cent lysol solution brought the

temperature down to the normal within twenty-four hours. While it cannot be said that in these cases lysol was the sole factor in saving the patients' lives, it must nevertheless be acknowledged that the uniformly excellent results when the drug was used speak eloquently in its favor.

The directions for the aseptic toilet with lysol are as follows: The hands and arms of the operator should be washed in 1 per cent. warm solution of lysol for two minutes and thoroughly scrubbed; the nails should then be most carefully cleansed, and the hands again washed in a similar solution for two minutes, during which an energetic use of the nail-brush should be practised. The previously dried and sterilized instruments should be placed in a half per cent. lysol solution. In cases of child-birth the patient's genitalia should be washed with a 1 per cent. solution of lysol and if the smallness of the parts or other condition indicates the probability of perineal rupture the pubic hairs may be shaved off.

Only when positively indicated, either by fever or fœted discharge, should the internal genitalia be syringed or washed. After syringing or washing the vagina with lysol solution, contrary to carbolic acid or the bichloride, the natural slipperiness of the passage is not only retained, but possibly increased. Before the production of abortions or the performance of plastic operations, it is understood that the internal as well as the external genitalia should be cleansed with the solution.

Lysol is to be recommended for its powerful antimycotic properties, its relative freedom from danger, its easy solubility in water, its cheapness, and its remarkably convenient applicability, the odor is, however, unpleasant, and consequently a disadvantage.

Book Reviews.

A DICTIONARY OF TREATMENT, or Therapeutic Index. Including Medical and Surgical Therapeutics. By William Whitla, M.D., Professor of Materia Medica and Therapeutics in the Queen's College, Belfast. Revised and adapted to the Pharmacopœia of the United States. 8vo, 917 pp. Philadelphia: Lea Brothers & Co., 1892. Price, cloth, $4.

This is a decidedly useful index, consisting of an alphabetical arrangement of diseases, each of which receives most careful attention regarding treatment. The author adheres pretty clearly to his own views as expressed in his work on Materia Medica, but also quotes largely from the experience of other distinguished clinicians. The treatment of each disease is carefully reviewed, and old as well as new therapeutic measures receive attention. A conservative element (exceedingly grateful in these days of too rapid conclusions in medical affairs) plainly runs through the book, and yet the very latest modes of treatment have seldom been neglected. The arrangement is simple and very convenient; the disease about which information is wanted can be most readily found; and in all cases the facts are given in detail and most concisely, thus making the work of special value to the practising physician, for whom it is most suitable. Hygiene and dietetics are considered in all diseases in which they constitute an important factor in treatment.

Alcohol is recommended as a substitute for opium in dealing with the opium habit, and the author prefers that the opium be wholly withdrawn at once, alcohol being given in quantities sufficient to control the symptoms.

The chapter devoted to phthisis is well written, and well worth reading.

The value of digitalis in pneumonia is deprecated, and cardio-vascular depressants are not referred to in the initial stages of the disease. The author relies chiefly on antipyrine to control the temperature in acute pneumonia.

In the section devoted to the treatment of typhoid fever, the use of quinine is looked upon rather unfavorably, and the careful employment of antipyrine as an antipyretic is advised. The author remarks that from all available means of arriving at a correct conclusion he believes that the routine cold bath treatment has lowered the mortality fifty per cent. Concerning the use of alcohol in continued fevers, Whitla remarks that it is being used less and less every year, and that the majority of cases of typhoid fever do not require any stimulants at any stage of the

disease. In this he differs from a large class of physicians in America, who routinely give small amounts of alcohol in some form from the beginning to aid digestion and conserve the strength of the patient.

Taken altogether the book admits of but little adverse criticism. It is the most exhaustive index to treatment that we have seen, and since it is bright, new and quite up to date and carefully written we heartily recommend it to the profession as a very useful, practical book.

OUTLINES OF ZOOLOGY. By J. Arthur Thompson, M. A., F. R. S. E., Lecturer on Zoology in the School of Medicine, Edinburgh. With 32 full page illustrations, 12 mo., 641 pp. New York: D. Appleton & Co., 1892.

This book is intended to serve as a manual for the use of students in the lecture-room, museum, and laboratory, and as an accompaniment to certain other works. The first seven chapters treat of a general survey of the animal kingdom, physiology, morphology, reproduction and life history, palæontology, geographical distribution, and ætiology. The next seven chapters are devoted to the characters and classification of the invertebrates. The remaining chapters to the vertebrates.

The author has done his work in a most excellent manner, and the student will find this little book all that can be desired. The plates are diagrammatic, well executed, and capitally illustrate the points referred to. The typographical appearance of the work is very creditable to the publishers.

Periscope.

THERAPEUTICS.

CREASOTE IN THE GRIPPE.

Dr. Jselin (*Lo Sperimentale*, No. 1, 1892) gives creasote in large doses in the grippe, either administering it in pill form, each containing five centigrammes (one drop), and the daily dose ranging from twenty to twenty-five pills, or by inhalation in the rhinitis and laryngitis which develop during this disease.

STRYCHNIN AS AN ANTIDOTE TO OPIUM.

M. C. T. Dercum reports (*Pharm. Zeitung*) the recovery of a patient who had taken 30 grammes of the extract of opium, by hypodermic injections of 0.00375 of a gramme dose of strychnin every hour for seven doses. Prior to using the strychnin, all the usual antidotes and restorative methods were unsuccessfully tried.—*Répertoire de Pharmacie*, No. 8, 1891.

THE TREATMENT OF CARCINOMA.

At a recent meeting of the Royal Society of Physicians of Vienna, Adamkiewicz (*Wiener klin. Wochenschr.*, No. 47, 1891, p. 888) presented a case of epithelioma of the inner angle of the right eye, in in which cicatrization had taken place in the course of treatment by means of subcutaneous injections of a substance called cancroin that, it was claimed, exerted a specific influence upon carcinoma.

Billroth, Kaposi, Dittel, and others, however, maintained that the progress of the case was not unusual and were unwilling to admit any specific action or curative result not to be obtained by other methods of treatment.

THE CARDINAL TRUTH OF CLIMATE-THERAPY.

"The one great truth stands ever before the eye of the modern surgeon—cleanliness; absolute, scrupulous cleanliness leads to success. Change of climate for consumptives is extremely valuable, but it involves many disadvantages which are far more fatal to its success than the abuse of antiseptics is in wound-treatment, and yet we continue to send patients away from comfortable homes to uncomfortable hotels and boarding-houses, or incomplete sanitaria, where many disadvantages in diet and probable indiscretions in exercise neutralize the most valuable element of all appropriate climates—pure air. It will be a glorious day for medicine when the physician will recognize that the *constant exposure of the phthisical patient to pure air* is the cardinal truth of climate-therapy, as cleanliness is now recognized by the surgeon in wound-treatment."—Dr. Simon Baruch in the *Dietetic and Hygienic Gazette*, January, 1892.

SUBCUTANEOUS INJECTION OF SALT SOLUTION IN DIARRHŒAL COLLAPSE.

Demiéville (*Rev. Méd. de la Suisse Romande*, No. 1, 1892) recommends the subcutaneous injection of sterilized salt solu-

tion in the collapse produced by acute gastro-enteritis in infants. The apparatus required is simple: A piece of elastic India-rubber tubing about a yard and a-half long, provided with a weight at one end, and at the other connected with a small aspirator needle. The tube and needle should be disinfected, either in a stove, if one be available, or with corrosive sublimate (1 in 1,000), and then washed in boiled water. The salt solution used for injection is a solution of chloride of sodium, of the strength of 6 in 1,000, and should be boiled before use. As the solution is rapidly cooled by passing through the tubing, it is well to employ a large reservoir, and to be sure that the solution as it leaves the needle is warm. The skin must be thoroughly disinfected. As to the quantity to be used, a case is related in which a child aged 4½ months received about ʒiv; the injections was made into the thighs, and were followed by gentle massage. The patient in the case mentioned appeared to be *in extremis* when the injections were given, but began to improve almost at once, and reaction was established in a few hours. The injection made the child cry, but did not seen to cause much suffering. Demiéville believes that the good results obtained by this method are to be attributed to the improvement thus produced in the circulation, especially in that of the nervous centres.—*Brit. Med. Jour.*

ON THE TREATMENT OF SCROFULODERMA AND LUPUS.

H. G. Brooke (*The British Journal of Dermatology*, Dec. 1891) reports several cases which could not be treated with radical measures; but in which he obtained satisfactory results by the use of an ointment suggested by himself about a year previously. Case 1 was an old lupus, involving the whole ear and lower part of the cheek and also extending upon the neck. In this case the first combination did not prove satisfactory on account of its color, etc., and he modified it as follows:

℞ Zinc. oxid.
Pulv. amyli.....āā ¼ oz.
Vaselin alb.....½ oz.
Hydrarg. oleat.....5 per ct., 1 oz.
Acid. salicyl.....20 grs.
Icthyol.....20 grs.
Ol. lavandulæ.....q. s.
M. Et fiat ung.

This ointment was well rubbed in and under its use the disease began disappearing slowly and the affected field became greatly reduced.

Case 2 was also one of lupus and very much severer than in the previous patient. The use of the ointment, however, gave very satisfactory results. Case 3 was one of scrofulodermic abscesses, and likewise Case 4. The effect of the treatment in these two was also excellent. Brooke states that the best effects are obtained in cases of scrofulodermic tumors and ulcerations, but it is also pronounced in those cases in which lupus has developed from a scrofulodermic base. For pure lupus, the effect is weaker, especially if there is much sclerosis or old scarring, and he only uses it as an auxiliary measure, when the disease is in form of simple yellow-brown nodules without apparent inflammation.

SALICYLATE OF SODA IN PLEURITIC EXUDATION.

Dr. Oerl has, during the past five years, treated nine similar cases of pleuritic effusion with salicylate of soda, after other remedies, such as phenacetin, pilocarpine, etc., had failed, and with the exception of two instances the results were favorable. In these two the resorption was only partial. The author concludes: 1. Serous pleuritic exudations of long standing may be removed by the administration of the salicylate of soda. 2. The salicylate has in exudative pleuritis, just as in polyarthritis, an apparently specific effect. 3. The fact that, so far as experience with this remedy has gone, no new collection of fluid is observed, makes surgical interference in serous pleuritic exudation not only not imperative, but, indeed, puts operative procedures in the background.—*Medizinal Zeitung*, No. 98, 1891.

TRAUMATIC TETANUS TREATED BY CARBOLIC ACID INJECTIONS.

Many are the methods which have been designed and given a trial in the treatment of traumatic tetanus. As a complication of wounds and surgical treatment nothing is more terrible either in its immediate or remote effects. And yet there is much evidence to show that its onset and development are largely dependent upon septic influences, suggesting the inference that the disease is probably in most cases preventible. The bacillus of tetanus has been for some time recognised by bacteriologists,

and with the introduction of strict antiseptic precautions in the treatment of wounds during the present day, the complication of tetanus is as a result but seldom seen. In a recent number of *Riforma Med.*, Messrs. Stazzeri and Titone record a case of traumatic tetanus treated with injections of carbolic acid, after the method of Baccelli. The patient was a boy, nine years of age, in whom the disease had developed as the result of contusion of the right knee with excoriation of the skin. Improvement was noted after the first injections, the paroxysms diminishing both in number and intensity. Encouraged by this fact, the authors kept up the injections for four weeks, administering them every six hours. At the end of fifteen days the patient had so far recovered as to be able to masticate his food, and at the end of the month the cure was complete. Baccelli used a 2 per cent. solution of carbolic acid.—*Med. Press.*

BENZOSOL AS A SUBSTITUTE FOR CREASOTE.

To some tuberculous patients the odor and taste of creasote are extremely unpleasant, and in some the administration of the remedy in suitable doses gives rise to impairment of appetite and derangement of digestion. Guaiacol, the active constituent of creasote, is open to similar objections. The most recent substitute proposed consists of a combination of guaiacol and benzoic acid, (the proportions are not stated), designated benzosol. Hughes (*Duetsche med. Wochenschr.*, 1891, No. 53, p. 1435) has employed benzosol in a series of twenty cases of pulmonary tuberculosis, with highly gratifying results Appetite returned, cough diminished, the subjective condition improved, and there was increase in weight. Benzosol is a white powder that may be administered thrice daily, after meals, in doses of three grains, made into troches, with the addition of a twelfth of a minim or more of oil peppermint. For a week, three troches may be given daily; then for three weeks, six troches daily; for the next week, three troches daily; in the sixth week the administration is intermitted, to be recommenced in the seventh.

LACTOSE AND GLUCOSE AS DIURETICS.

B. Vespa (*Rif Med.*, November 30th, 1891) has made a number of experiments as to the diuretic effect of lactose and glucose in various diseases. The following are his results: In the ascites of hepatic cirrhosis the diuretic effect was almost *nil*, and in acute and chronic nephritis it was hardly appreciable. In pleurisy with effusion, on the other hand, and in cardiac disease with disturbed compensatory action, the diuretic effect of lactose and glucose was most marked. As neither of these substances has any bad effect on the heart or on the nervous system they can be given at all times and in combination with any other remedy. They are well borne and do not cause nausea or other disagreeable effects.—*Brit. Med. Jour.*

PHOSPHORUS POISONING

Elkins and Middlemass (*British Medical Journal*, December 19, 1891) report the case of a lady, aged thirty-four, who suffered from mental depression, but was otherwise intelligent and coherent in conversation, and had a good memory. After sucking the phosphorus ends of two boxes of matches she died in about one hundred hours. Briefly, the mental symptoms were in order of appearance: listlessness; drowsiness; restlessness; mental confusion; inability to understand what was said; inability to answer questions readily or correctly; inability to recognize friends; semi-consciousness; semi-delirium; delirium; fits of great restlessness and violence; constant use of the word "yellow" when delirious; maniacal expression and behavior; coma. Sensory symptoms: Rheumatic pains; blindness.

Motor symptoms: Thick and drunken-like speech; pupils fixed and dilated; external strabismus of left eye. The pathological interest of the case lies in the changes in the nerve-cells of the cortex. Sections of the cortex showed fatty particles in the walls of the larger capillaries and fatty granules in the larger nerve-cells, most pronounced in the fourth layer. The authors state that the power of phosphorous to cause fatty degeneration in nerve-cells has lately been denied, but that this case shows that the nervous system does not escape. The occurrence of fatty degeneration in so many tissues of the body, points to some fundamental alteration in the processes of metabolism which phosphorous has the power of bringing about, but what this really consists in we can as yet only conjecture.

MEDICINE.

DISTURBANCE OF THE EQUILIBRIUM BY TUMORS OF THE FRONTAL LOBES.

Bruns (*Deutsche medicinische Wochenschrift*, February 18, 1892) reports four cases of tumors of the frontal lobes, confirmed by autopsies, where a disturbance of the equilibrium was a chief symptom, just as it is often the chief symptom in tumors of the cerebellum. He concludes his article as follows: "First, a disturbance of the equilibrium, exactly similar to the so-called cerebellum ataxia, very frequently appears as a symptom of tumors of the frontal regions. Second, this symptom is much less frequent in tumors of other brain regions."—*Univ. Med. Mag.*

SOME GENERAL CONSIDERATIONS ON THE SO-CALLED FEVER OF GROWTH.

Barbillion (*Mal. de l'Enf.*, Paris, 1892, x., 1,) writes:

The fever of growth does not exist as a morbid entity.

Growth does not cause fever any more than does pregnancy, the establishment of puberty, or senile decay.

The facts which have been grouped under the head of fever of growth are of varied causes, some of febrile states more or less clearly characterized (ephemeral fevers, fevers due to overwork, etc.), the others are slight degrees of acute osteomyelitis. Their relations proceed from secondary characteristics, such as pain in the epiphysis and the increase in height. The pains in the epiphysis may be observed in young subjects in all febrile states. The notable increase in height may show itself equally in the course of any of the maladies of childhood, or of adolescence, be these maladies acute or chronic.

There is no ground to establish on this basis, a morbid group which could only be constituted by the artificial re-union of dissimilar cases.

TREATMENT OF TUBERCULOUS RETROPHARYNGEAL ABSCESS.

Kramer (*Centralbl f. Chir.*, No. 12, 1892) advocates the view held by many modern surgeons that an external incision in the neck is a preferable method of dealing with retropharyngeal abscess of tuberculous origin. The old method of dealing with such abscesses by the mouth is attended with much risk, as it is impossible, with a wound freely exposed to the air, to prevent putrid infection of the suppurating cavity, and tuberculous material may be carried into the air passages and the gastro-intestinal canal. Moreover, in many cases the patient is troubled by a persistent fistulæ, and by long continued discharge of pus. An external opening in the neck, of sufficient extent to permit a strict antiseptic treatment of the tuberculous abscess, and a free application of iodoform, can, as has been shown by Chiene and Burckhardt, be made without difficulty or danger. In a case reported by the author, an incision about three inches in length was made on the left side of the neck between the larynx and the inner edge of the sterno-mastoid muscle. After division of the skin and the platysma, the deeper portion of the wound was opened up by blunt instruments until the well of the abscess was exposed below and to the inner side of the carotid artery. The wall was then punctured by a director, and the sac, after it had been emptied of its fluid contents, was freely laid open, and its inner surface scraped. Finally the exposed cavity was washed out with sublimate solution and plugged with iodoform gauze. The wound was quite healed by the end of the fourth week, and she patient, a girl, aged 4½ years, made a good recovery.—*Brit. Med. Jour.*

THE RELATION OF LARYNGEAL CATARRH TO LARYNGEAL PHTHISIS.

R. Norris Wolfenden (*Jour of Laryngology*, November, 1891) writes: There may be active epithelial destruction in the larynx of a non-specific character. The condition termed by Virchow, Pachydermia Laryngis Diffusa, is an illustration of this. It consists of a primary epithelial thickening, which may be followed by involvement of the mucous membrane, perichondritis and ulceration. It occurs where the laryngeal cartilages lie most near the surface, the mucous layer being very thin and covered by squamous epithelium, such are the edge of the epiglottis, the interarytenoid space, the processus-vocales and edges of the vocal bands. During the ulcerative process a strongly marked catarrh of the larynx exists, the erosions may be deep, having gray bases and red elevated edges. They rarely involve the vocal bands, as do tubercular ulcers. The acute form may develop very rapidly; it leaves slowly, the ulcers being frequently six to eight weeks in healing.

The symptoms consist of burning pain in the throat, hoarseness, sensation of dryness and expectoration of blood-stained sputum. These cases of ulcerative pachyderma do not pass into laryngeal phthisis. Catarrhal laryngitis may occur in a phthisical subject and be non-specific. Chronic catarrh of the throat, however, acts as a predisposing cause of laryngeal tuberculosis, by lowering the resisting power of the laryngeal mucous membrane, or by causing erosions which absorb the infectious materials. The invasion of a larynx by tuberculosis, is indicated by the following characteristics. Marked anæmia of the larynx and pharynx, which may be distinguished from simple constitutional anæmia by its dead yellow-white color and by its absence in the mouth, lips and face. The vessels of the larynx often stand well defined on the anæmic surface, and there is often paræsthesia of pharynx. Localized congestion of the faucial pillars, or of one vocal band, is important if associated with pharyngeal anæmia. These symptoms with laryngeal catarrh may constitute the only throat indications during the pulmonary affection, more commonly if the throat be at all implicated in the disease the process advances to infiltration and ulceration.

SURGERY.

THE STOMACH AFTER GASTROSTOMY.

Ewald (*Deut. Medizinal-Zeitung*, March 24th, 1892) has made the following observations in the case of a patient on whom gastrostomy had been performed. After the operation the peptic function of the stomach is entirely destroyed, and the nutrition of the patient takes place through the intestine. The movements of the stomach also suffer owing to adhesions, and hence a certain stagnation of its contents occurs. Thus the author has suggested that the fistula should be made near the pylorus, so that the food could be passed by means of a tube at once into the intestine. As long as the patient's strength is maintained, gastrostomy cannot be strongly recommended. The prognosis of stricture due to pressure from without is much the same unless the tumor be syphilitic. It is different with stricture brought about by corrosion, syphilis, or tubercle. Rarely the stricture may be due to cicatrization of a peptic ulcer in the lower part of the œsophagus. This ulcer is due to corrosion by the gastric juice, and occurs in anæmic individuals. The age is very important. Unlike carcinoma, attacks of pain are noted first and obstruction after. The patient was a girl, aged 19, who had previously suffered from gastric symptoms followed by an interval of a few months of health. At Easter, 1891, there was attacks of pain, and later difficulty of swallowing. The bougie could not be passed. There was wasting; no syphilis. In June, gastrostomy was performed by Oppenheim, the stomach being opened at an interval of five days. There was an escape at that time of the contents of the stomach, which contained free hydrochloric acid up to an acidity of 60 per cent. The acidity increased in a few days to 81 to 104 per cent. The patient gained 4.5 kilo. in weight; still the æsophageal bougie could not be passed. The dilatation of the stomach with delay in passing on the food was in favor of a cicatrized ulcer near the pylorus as well as in the æsophagus. Through a speculum the cardiac end of the stomach looked too red, and the pyloric too pale. The sound passed 13 centimetres upwards, 15 centimetres downwards, but did not enter the œsophagus or duodenum. The pressure in the moderately-filled organ was 30 to 35 millimetres, and with moderate compression of the abdomen 80 to 100 millimetres. This pressure was increased by applying the faradic current to the abdominal wall, but not by applying it to the inside of the stomach. This was due to adhesions. Salol excretion was delayed, salicylic acid appearing in the urine two and a-half to three hours afterwards. Secretion of hydrochloric acid lasted for ten and a-half hours after food, owing to dilatation of the stomach. If the stomach were washed out the night before, a fluid containing free hydrochloric acid and with peptic properties was found in it the next morning.—*Brit. Med. Jour.*

CANCER OF THE TESTICLE IN CHILD.

Dr. Sabrazes and Fromaget write: A young child, two and a half years of age, presented a round and regular tumor of the left testicle of about the size of a small orange. It was heavy, tense, opaque, and but little sensitive to pressure. The scrotum, which was covered with a network of veins, was free from adhesions, and the

spermatic cord seemed normal. No enlarged glands could be detected, either in the groins or pelvis. Castration was performed, and a solid and voluminous tumor removed, involving the whole testicle, except the epyidymis. Three ligatures were applied to the spermatic cord, which the tumor had implicated, the scrotum was stitched up, drained and dressed antiseptically. Recovery took place without complication, except a slight œdematous induration of the scrotum and concomitant rise in temperature immediately following the operation. The tumor, on microscopical examination, was found to be an epithelial cancer. The writer emphasizes the rarity of tumors of the testicle in children. Ch. Monod reported in the *Progrès Medical*, 1884, twenty-six cases of malignant tumor of the testicles in children, of which in the majority of cases the growth was either sarcoma or carcinoma; in two the tumor in question was a true enchondroma. To these may be added a case described by M. Piechand in his *Lecons Cliniques*, Bordeaux, 1889. The prognosis of these neoplasms is so grave that M. Monod thinks these patients condemned to certain death in six months to a year.—*Journal de Médicine de Bordeaux*, No. 20, 1890.

ON THE TREATMENT OF PSOAS ABSCESSES BY MEANS OF INJECTIONS OF IODOFORM.

Dr. Johann P. Bitsch (Copenhagen), after treating several cases of psoas abscess by means of iodoform suspended in glycerine, arrives at the following conclusions:

1. This method of treatment should be tried in every case of psoas abscess. If the result be unfavorable there will still remain an opportunity to employ operative procedures, while the prognosis is not unfavorably influenced by this treatment.

2. The treatment by injection has the advantage of being a slight operation, without danger and requiring no special skill. Anæsthesia is only exceptionally necessary as the procedure is not painful. Any physician will have the necessary instruments. It may be employed in patients who are up and about, and promises a greater degree of success than any other method and, lastly, causes no disfigurement.

3. As to its disadvantages they are only slight. Iodoform poisoning may occur, yet this may be avoided by not injecting too large quantities of the fluid holding the iodoform. If it should happen, one may be assured that it will be easily overcome; no fatal case has been observed.

4. On the contrary, it may take much time before the abscess is entirely healed, even one half year. But this disadvantage is over-balanced by the fact that the patient can be up and attend to his business during the whole time of treatment, except one or two days after each injection. Then he should rest in bed.

5. This method is adapted to the treatment of every cold, tuberculous abscess, whether it be of osteopathic, glandular or idiopathic origin. It is especially useful in small abscesses following osteitis, where it is astonishingly efficacious.

6. Finally, it has been successfully used in all other tuberculous affections where local treatment is possible, especially in osseous and articular tuberculosis.

The writer used this method with excellent results in a case of tuberculous coxitis in which resection was thought indicated.—*Hospitals Tidende*, No. 49, 1890.

SURGICAL TREATMENT OF GANGRENE OF THE LUNG.

At the last meeting of the Académie de Mèdicine, M. Périer related the case of a man aged fifty-eight, who was attacked with intra-pulmonary gangrene which was first thought to be interlobar pleurisy. But the sudden appearance of the fœtid odour of the breath revealed the true nature of the case. Antisepsy by the mouth having given no favorable result, M. Périer incised the chest over the left intercostal space, and seized with the forceps the subjacent lung tissue with its pleural covering. He cut the serous envelope and plunged the knife into the lung, and at a distance of one inch he penetrated into the seat of the gangrene. The place was carefully cleaned out and the surface touched with camphorated naphthol and two drainage tubes fixed in the wound. A fortnight afterwards one of the tubes was withdrawn, and the other four days subsequently. The fistula closed in three weeks, and the man is in perfect health he neither coughs nor expectorates, nor does his chest show any stethoscopical signs of a pulmonary lesion.

M. Lancereaux said that in cases of pulmonary gangrene he frequently succeeded with hyposulphite of soda given in large doses, one drachm in the twenty-four hours.

TREATMENT OF LUPUS BY EXCISION.

Kramer (*Centralbl. f. Chir.* No. 8. 1892) holds that the present methods of treating lupus by caustics and by scraping are very unsatisfactory, and advocates excision of the whole of the diseased portion of skin. This is removed with the knife together with the subcutaneous tissue as far down as the muscular layer. After an interval of about twelve days, when granulations have formed, the defect is closed either by transplantation after Thiersch's method, or by a plastic operation. The author states that he has carried out this treatment in eleven cases during the past two years, and that it has invariably resulted in permanent healing at the seat of operation. Although this method is more applicable to cases in which a portion of an extremity or of the trunk is affected, it may be practised with good results in many cases of lupus of the face. In this region excision should be performed as early as possible; and even if the wound be an extensive one the surgeon will be able to close it, thanks to the improved methods of transplantation, implantation, and plastic procedure. The scar thus formed, though more apparent than that produced after other methods of treatment, has the advantage of being quite sound, and free from any remains of the disease.—*Brit. Med. Jour.*

TRANSPERITONEAL NEPHRECTOMY.

Heinricus (*Centralbl. f. Chirurgie,* 1892, No. 14, p. 297) reports the case of a woman, twenty-seven years old, who presented an abdominal tumor below and to the left of the umbilicus. The swelling had first been observed two years previously, when it was as large as a fist. It had subsequently increased in size, but for a year its growth had ceased. The tumor was tense and mobile. Over it, and in the left lumbar region, the percussion-note was dull. The position of the uterus was normal. On vaginal and rectal examination no connection between the tumor and the internal genitalia could be detected. The urine was clear, of a specific gravity of 1015, and contained no albumin. A diagnosis of hydronephrosis was made, and celiotomy decided upon. The colon was displaced from in front of the tumor, the peritoneum incised, and the cyst punctured. The ureter and the pedicle of the mass were secured by several double ligatures, and the kidney was removed. No cause for the abnormal condition could be found. After the operation, the quantity of urine passed gradually increased, until it reached the normal. The patient ultimately recovered. —*News.*

THE RADICAL CURE OF HYPERTROPHY OF THE PROSTATE.

R. Eigembrodt (*Bonn Beitiäge zur klin.* Chirurgie, Bd. viii). The following conclusions are reached in E's valuable paper: A radical operation for obstructive hypertrophy of the prostate is possible in the majority of cases, the method by supra-pubic scystotomy being the preferable one. An early operation is much to be preferred to a late one, although even in advanced cases some improvement may be expected by an operation. The condition of the bladder itself demands careful treatment following the operation. In case the obstruction to urination is found not to be due to a prominent or valve-like projection, but rather by a general enlargement of the prostate body, in connection with a sacculation of the bladder, provision for free escape of urine may be provided for by a deep cuneiform excision of the posterior portion of of the urethral orifice.

OBSTETRICS.

PORRO OPERATION, WITH INTRAPERITONEAL TREATMENT OF STUMP.

Bossi (*Gazetta degli Ospitali*, abstracted in *Nouvelles Archives d' Obstetrique*, 1892, p. 129) reports another case of Porro operation, with intrauterine treatment of the stump and uninterrupted convalescence. The cervical canal was disinfected by the actual cautery. The stitches are inserted in tiers. He presents the following arguments against fixation of the stump in the abdominal wound after hysterectomy:

The pedicle fixed externally is a constant menace of infection. The pedicle fixed externally threatens to retract within the abdomen. It needs prolonged care and multiplied precautions before it is exfoliated and the base cicatrized. It exposes

the woman to the danger of a fistula, often permanent or difficult to heal. It exposes her to the danger of hernia at the point where the stump was fixed. If the stump is not long enough, the dragging of the vagina and attached organs gives rise to very disagreeable sensations.—*Univ. Med. Mag.*

ANÆSTHESIA IN PREGNANCY AND DISEASES OF WOMEN.

Marcel Baudoin (*Nouv. Arch. d'Obstét. et de Gynéc.*, February, 1892) claims especial advantages for his method of administering anæsthetics when required for women who are pregnant or subject to diseases of the internal organs. The method consists in the administration of small quantities of chloroform in continuous doses. The excited stage is very mild or absent, vomiting does not occur, the anæsthesia is complete, and the patient can sleep comfortably for hours after the operation. No discomfort follows the awakening from insensibility. Anæsthesia is complete when the reflexes are abolished. The pelvic reflexes do not disappear till after the palpebral reflex. It is very hard to suppress local sensitiveness in some hysterical women with tubo-ovarian inflammation; Baudoin believes that this method abolishes the reflexes completely. Severe operations on pregnant women can be safely performed by this method, as in a case of radical cure of umbilical hernia which the author quotes. The method is also well suited for other morbid conditions which may exist in pregnant subjects, such as alcoholism, where the excited stage is always marked when chloroform is given rapidly, and also cardiac and pulmonary diseases.—*Brit. Med. Jour.*

PUERPERAL TETANUS AFTER ABORTION.

Vinay (*Arch. de Tocol. et de Gynèc.*, March, 1892) reports a case of this rare complication which occurred last autumn in the practice of a medical man in Paris. The patient was a 4-para, aged 36. On November 10th, 1891, when in the second month of pregnancy, uterine hæmorrhages set in, and abortion took place unobserved in the course of these attacks. No tampon was applied. The lochia became fœtid, there was hypogastric pain, and it was deemed necessary to use the curette. The operation was done on November 17th under chloroform. Some putrid membrane was removed, and the endometrium was scraped and carefully washed. One hour later a rigor occurred. On the night of November 19th stiffness began to be felt in the region of the masseters, then trismus, rapidly followed by pharyngeal spasm. In the course of the 20th, the most pronounced tetanus developed. during the attacks emprosthotonus instead of opisthotonus occurred, the head and trunk being violently bent forwards. On the morning of the 21st the attacks were very frequent and severe, and the patient died thirty-six hours after the appearance of the first symptoms. She was conscious throughout, the pulse did not exceed 108, nor the vaginal temperature 99.8°. Vinay has collected 106 cases of puerperal tetanus. The recoveries only amounted to 12; 59 occurred in labors at term, 7 recovering; and 47 in abortions, 5 recovering. Hence the total mortality is 88.67 per cent., or higher than in any form of surgical tetanus, excepting in cases of wounds on the battlefield, where the mortality is as follows: In tetanus after wounds of the head and neck, 95.2 per cent.; after wounds of the lower extremity, 89.7 per cent.; after wounds of the upper extremity, 86.3 per cent. Relapses after one attack of puerperal tetanus have always proved fatal, hence the necessity of prolonged rest in bed when the patient has recovered from tetanus. The disease is as deadly when it sets in late as when it occurs within a day or two of labor. The only treatment which has afforded distinctly good results is inhalation of chloroform carefully maintained for several hours; or large doses of chloral (15 grains) hourly, with narcotization when the attacks of spasm set in. Localized tetanus of the uterus is a disease completely distinct from puerperal tetanus. —*Brit. Med. Jour.*

ASAFŒTIDA FOR HABITUAL ABORTION.

In support of the utility of asafœtida in the prevention of habitually repeated abortion not dependent upon a recognizable cause, such as syphilis, tuberculosis, disease of the uterus or its appendages, Turazzi (*Centralbl. für Gynäkol*, 1892, No. 9, p. 164) has collected forty-one cases from various sources, in thirty-seven of which the use of the remedy was followed by normal labor. Three grains of

the gum-resin are given daily from the beginning of pregnancy, the quantity being gradually increased to fifteen grains, with a subsequent gradual diminution in the dose.—*News.*

GYNECOLOGY.

ELECTROTHERAPY OF UTERINE FIBROIDS.

A. Martin and Mackenrodt (*Deutsche med. Wochenschr.*, No. 2, 1892) strongly deprecate the new method of treating fibroids by electricity. Of 36 cases so treated in their own hospital, only 20 (in these the fibroids were mostly small) derived distinct benefit. On the other hand, it was noticed that in none of the 20 was there any distinct diminution in the size of the tumor, and that in 8 cases the patients were over 45, so that the climacteric played a greater or lesser part in the relief afforded by the electricity. In the remaining 12 the amelioration was but temporary or partial, the pains and hæmorrhage often recurring. The remaining 16 of the entire 36 were distinctly made worse, and 3 died. In the first fatal case the patient was aged 50, and after recurrence of symptoms, with subsequent fresh application of electricity, great hæmorrhage occurred; and had to be checked by other means. When apparently convalescent the patient died of pulmonary embolism. In the second case the tumor was large. After twenty-nine applications of electricity the temperature rose and the tumor grew soft. Abdominal section was needed to remove the tumor, which was suppurating; the patient was already septic. She died on the day after operation. In the third case fever appeared after seventeen applications. No operation was permitted. Peritonitis set in and death followed within three weeks. Drs. Martin and Mackenrodt's experience of cases partially under the treatment of others is not more favorable. Comparing these cases with a series of 39, where fibroids were treated by operation, they recorded 20 cases of myomatous uteri by abdominal section with 2 deaths; 14 cases of removal of myomatous uteri through the vagina, with careful closure of Douglas's pouch, no deaths; 3 cases of enucleation of fibroids by abdominal section with no death; and 2 cases of enucleation through the vagina with no death. Thus their series stand as follows:—Treatment by electricity (36 cases): Symptomatic improvement, 20 cases, or 55.5 per cent.; condition of patient aggravated (including 3 deaths), 16 cases, or 45.5 per cent. Treatment by operation (39 cases): Recovered, 37, died 2. The percentage of mortality was thus only 5.1 per cent. for operations, but 8.5 for electricity. Martin and Mackenrodt conclude that they feel bound to reject the electric treatment of myomata. Small fibroids should be left alone as long as they do no harm, but when serious constitutional disturbance sets in operative measures are necessary.—*Brit. Med. Jour.*

STERILITY AND HYDATID DISEASE OF LIVER.

Petit (*Arch. de Tocol. et d'Obstèt.*, December, 1891) reports the case of a patient who had a hydatid cyst of the liver, which contained over 8 pints of fluid. She had uterine catarrh, and was sterile. Laparotomy was performed, the hydatid disease was cured, and the patient immediately became pregnant. On that account Petit believes that the catarrh and sterility might have been due to the large tumor of the liver, since the removal of the tumor was so soon followed by pregnancy. —*Brit. Med. Jour.*

HYPERTROPHY OF THE BREAST.

Lihotzky (*Centralbl. f. Gynäk.*, No 10, 1892) exhibited before the Vienna Obstetrical Society in February a hypertrophied breast removed from a single woman, aged 26. When fresh it weighed nearly 10 lbs. There was uniform increase in the interglandular connective tissue with development of glandular acini in abundance.

SUBACUTE ENDOMETRITIS IN THE LATTER MONTHS OF GESTATION.

Löhlein reports in the *Centralblatt für Gynäkologie*, 1892, No. 11, the case of a woman, aged forty-six years, who had borne a number of children. She was admitted to the clinic suffering from endometritis following an abortion; was treated by curetting, and discharged as recovered. She returned near the end of her next pregnancy, complaining of a chill, followed by fever, prostration, and obstinate pain. The pain was worst upon the left side of the patient's abdomen, and radiated over her body. On examination the abdomen was found painful, the uterus sensitive to

pressure, especially upon the right side. Clonic contractions of the uterine muscle were present; the membranes were tense, but dilatation was proceeding slowly. Her fever was remittent in character, and persistent, with diminution of sleep and appetite during an entire week. Labor pains finally ensued, and a living child was born. The placenta was retained, and when the hand was introduced it was found to be completely adherent in the right half of the uterus. There were no infarcts in the placenta, but old, thick, and brownish extravasations of its uterine surface. The delivery of the placenta was followed by cessation of pain and rapid recovery.—*Amer. Jour. Med. Sci.*

PEDIATRICS.

TWO CASES OF SCURVY IN CHILDREN.

Charpentier (*The Lancet*, October 3, 1891.) reports the following:

Case 1.—This patient was brought on account of pain and tenderness when moved The patient was a boy, nine months old.

From soon after birth he was fed on diluted cow's milk. Gastric catarrh developing, condensed milk was used until three months of age, when a "patent" starchy food was used. On examination the child was fat, but flabby and pale, and in pain when moved. The thighs were tender to the touch. The fontanels were quite open, and the ends of the bones were slightly enlarged. The abdomen was swollen. There were no teeth. He was restless at night, and sweated profusely. The bowels acted freely, and the motions were pasty and very offensive.

Rickets was diagnosed, and the child was ordered a malted food with diluted cow's milk, gradually increasing strength. Beef tea was given once daily, and a mixture of iodide of potash and lacto-phosphate of lime.

A fortnight later he was brought again, showing a small bruise on the back, and later he developed ecchymoses on the eyelids, while the left thigh was swollen, hard, and brawny, and very tender to the touch. The mouth was sore, and the gums tender and red. A meal of potato pulp was ordered twice a day, as well as raw meat juice and the milk, The improvement was most marked; a fortnight later he could take iron and cod-liver oil with advantage to health.

The second case was one of sporadic cretinism, which also developed scurvy. A girl, sixteen years old, with the typical appearance of a cretin. The mother states that the child was dull at birth, and when seven weeks old, had convulsions for a week; since then she had never been like other children.

The child cannot stand or speak, takes no interest in life, and can only swallow liquids; she has a goitre the size of an orange. She has been fed on fresh milk with beef tea and minced meat occasionally.

On examination the gums were swollen, deep reddish-purple, and prone to bleed.

There was a small bruise on the left forearm, one on the left thigh, and another on the right leg, which could not be accounted for.

The patient was ordered lime juice to drink and potato pulp three times a day. In a week's time all the symptoms of scurvy had disappeared. Remarks: The occurrence of these two cases illustrates the necessity of a better knowledge of dietetics in medical practice.

Another point is the common use of condensed milk. It is unquestionably very bad for infants.

It has been said that fresh cow's milk has anti-scorbutic properties. One of these cases had always had new milk, and never condensed milk, while the other developed scurvy while he was taking new milk when under treatment for rickets. We must admit that the scorbutic condition depends more particularly on the lack of other appropriate food. The author thinks that rickets and scurvy are more benefited by raw meat juice and potato pulp, than by the freshness of the milk.

MENSTRUATION IN A CHILD.

V. F. Iakubovitch, of St. Petersburg (*Vratch*, No. 9, 1892, p. 214), reports the case of a girl, at present 6½ years old, who has been menstruating since the age of 2. The catamenia occur several times a year (most frequently during the summer months), lasting on each occasion three or four days. The bleeding is preceded by irritability and a tendency to shed tears, and is followed by headache, giddiness, and other signs of anæmia. The girl's mammæ are each as large as a small orange, the clitoris and the labia minora being somewhat hypertrophied but the majora

normal. When examining the child during her first menstruation the author found the external genitals healthy, while the breasts proved to be of the size of a hen's egg, tender, tense, and discharging a milky fluid. The author points out that (1) cases of precocious menstruation are rare; Henning was able to collect from international literature not more than thirty-five instances;(2) the prognosis, on the whole, is favorable, still the hæmorrhage may give rise to anæmia and chlorosis; (3) no wine, or coffee, or any stimulants should be allowed to such children, while if bleeding is profuse hydrastis canadensis or ergot should be given internally.—*Brit. Med. Jour.*

TUBERCULOSIS OF THE TESTES IN CHILDREN.

Nine cases of tuberculosis of the testes have been observed at *L' Hospital des Enfants-Malades* by Hutinel and Deschamps (*Arch. Gènerales de Médecine*). The authors believe, from their studies, that the disease is most frequent during the first years of life, and not on the approach of puberty, as has been supposed. The affection exhibits the same symptomatology, with few exceptions, as it does in the case of adults. Sometime it begins as an acute tubercular orchitis, resembling a blennorrhagic orchitis, at others, it makes its appearence only after a course of peritoneal or intestinal tuberculosis. Its march is the as that of any other local tubercular affection. The diagnosis is easily made. The prognosis is generally serious. In order to obtain a cure in these cases, an active medical treatment should be pursued. This should consist in the administration of codliver oil, creosote, arsenic, phosphate of calcium, sea-bathing, etc. The authors do not favor castration, and believe that the general treatment is sufficient for all practical purposes. Puncturing may be restored to when the testicle has become caseous.—*Le Bulletin Mèdical*, December 9, 1891.

HYGIENE.

AN ASSERTED INFECTIOUS ORIGIN OF RHACHITIS.

Mircoli (*Gaz. degli Ospitali*, August 16, 1891, and *Deutsche med. Zeit.*, No. 80, 1891), in previous publications, has reported his discovery of the presence of staphylococci and streptococci in the nervous system in certain nervous affections, such as sciatica, chorea, and hydrocephalus. More recent investigations have enabled him to confirn this result in a new case of hydrocephalus, and, strange to say, in a case of rhachitis. Cultures made from scrapings from the bones of a rhachitic child are said to have given material for pure cultures of these pyogenic micrococci. The most notable point of difference from the results in the other cases was that the colonies of the streptococcus from the bone scrapings of the rhachitic case were not numerous.

The author supposses that in adults the pyogenic micrococci provoke local lesions, while in children they give rise to a general infection, which manifests itself more particularly in the organs that are the seat of greatest formative and functional activity, namely, the osseous and nervous systems.—*Amer. Jour. Med. Soc.*

BACILLIAN INFECTION.

The invasion of this theory into the domain of neurology has extended beyond that of tetanus, etc., into the region of other nervous affections. The *Supplement to the British Medical Journal* refers to a short account of the epidemic reported by Medin, of Stockholm, before the Tenth International Congress, and appearing in the "Transactions," is given in the *Centralblatt f. klin. Medicin*, Sept. 5th, 1891. Within some five months, forty-four cases were observed occurring in previously healthy children and without apparent cause. In the febrile stage there was besides the fever somnolence, dyspepsia, rarely vomiting and diarrhœa, more often constipation. Paralytic symptoms showed themselves in this stage. The fever and somnolence lasted in some cases several days after the onset of the paralysis, but further paralysis did not take place after the fever had disappeared. Facial monoplegia was noted in three cases, and facial paralysis with pyomyelitis and polyneuritis in another five. Abducens paralysis was present in five case, twice together with ordinary poliomyelitis, once at the same time as polyneuritis, once in a case of polio-encephalitis and once in a fatal case. All the nuclei in the pons and medulla corresponding morphologically and

physiologically with the cells in the anterior horns of the spinal cord were at times affected

In the discussion which followed, Heubner looked upon it as an infective desease. Professor Henoch spoke concerning the question of identity in the cases and said that the presence of so many cerebral symptoms was very striking.

COMPARATIVE PATHOLOGY OF THE WHITE MAN AND THE NEGRO.

From an analysis of the cases of 430,466 negro patients treated by them edical department of the American Bureau of Refugees, from 1865 to 1872, Dr. Reyburn, late Surgeon United States Volunteers, draws certain conclusions as to the proclivity of the African race to particular types of disease. A basis of comparison between the pathological tendencies of white people and negroes respectively is afforded by 22,053 cases of disease in white patients treated during the same period. Among the negroes there were 152,141 cases of remittent and intermittent fever, and Dr. Reyburn thinks there is no difference as regards susceptibility to these fevers between the white and the colored populations of the Southern States. The statistics futher show that the statements commonly made concerning the extreme liability of negroes to scrofulous disease and pulmonary tuberculosis rest on no solid foundation. The deaths from typhoid fever among the negroes amounted to 25 per cent. of the cases treated, this high mortality being dependent on the frequency of severe intestinal lesions, The death-rate from diarrhœa and dysentery was also high, owing, according to Dr. Reyburn, to the ignorance of hygienic laws which prevails among the colored people. The negro freedman and the white refugee alike fell victims to epidemic cholera, one half of the patients dying under every variety of treatment. Delirium tremens was of very rare occurrence among the negroes a circumstance which Dr. Reyburn attributes to "the want of development of the cerebral hemispheres." Alcoholism, he says, is in the negro more apt to lead to epileptiform convulsions or mania than to delirium tremens. Dr. Reyburn concludes that the negro has not the same power of resistance to acute inflammations, such as pneumonia, as the Caucasian, and does not recover from protracted and exhausting illness, such as typhoid fever, so well as the latter. On the other hand the negro has greater reparative power after injuries and surgical operations than the white man, in this resembling the dark races in Asia and elsewhere.—*Brit. Med. Jour.*

CONTAGIOUSNESS OF ACUTE TONSILLITIS.

Dubousquet-Laborderie (*Jour. de Méd. d. Paris*, December, 1891), states that cases which show the contagiousness of tonsillitis are numerous. It is observed in families, hospitals, schools—more rarely a veritable epidemic is observed. We do not deny the contagiousness of measles, scarlatina, mumps—though we are equally in ignorance of the agent of the contagion.

The incubation varies from two to six days. The conditions favorable for the production of the disease are: an epidemic, cold, sudden changes of temperature, crowding, lack of cleanliness. Internal conditions are the age of the subject, scrofula. There is an incontestable predisposition; a first attack predisposes to others.

The disease appears to lie latent as in erysipelas where there are repeated attacks.

The germs of the disease remain inactive in the crypts of the tonsil until such time as the internal and external conditions give them a vicious activity. The infectious nature of the disease and its contagiousness being admitted, certain therapeutic and prophylactic measures should not be neglected. Antiseptics, internally and externally, at the onset, an emetic or a cathartic, sulphate of quinine, salicylate of soda or salol, gargles of a solution of boric acid, four per cent., or carbolic acid, one per cent. A solution of chloral, which is antiseptic and calmative at the same time, may be used if the pain is the considerable and swallowing difficult.

MEDICAL CHEMISTRY.

PURIFIED KOLA.

A chocolate manufacturer of Berlin has patented a process by which the bitter principle of the kola nut is completely removed, so that it may be employed in admixture with cacao in the preparation of chocolate. The purified kola is also proposed to be used for the preparation of kola wine, kola pastils, etc.

DIFFERENTIATION OF PHENACETIN FROM OTHER ANTIPYRETICS.

Autenreith and Hirschberg, in a paper in the *Archiv für Chemie* on the derivatives of phenacetin, say that phenacetin may be distinguished from antifebrin and antipyrin, by boiling the suspected substances with dilute nitric acid (10-12 per cent.) for a short time. Phenacetin is thus nitrated, and the nitroderivative colors the nitric acid solution yellow or orange, whereas a similar solution of antifebrin and antipyrin remains colorless. When the yellow solution is cooled, the nitrophenacetin crystallizes in yellow needles.

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NEWS AND MISCELLANY.

ALKALOIDS AND ALCOHOL.

In Mr. Goschen's Budget speech he made an interesting comparison between the consumption of alcoholic spirits, coffee, and tea at the present day and fifty years ago. In 1841 the average of alcohol absorbed per head of the population was 30 ounces, whilst of coffee 17½ ounces were consumed, and of tea 18½ ounces. In 1891 56 ounces of alcohol *per capita* were consumed, whilst the consumption of coffee and tea had risen to nearly 100 ounces. It is curious that whilst the consumption of coffee as compared with fifty years ago has gone down 5 ounces a head, the consumption of tea has gone up nearly 80 ounces.—*Brit. Med. Jour.*

MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA

At a special meeting of the Board of Trustees, the following elections were made:

Dr. W. Frank Haehnlen, Demonstrator of Obstetrics at the Univ. of Penn. was elected Professor of Obstetrics.

Dr. W. Easterly Ashton, Lecturer on Gynæcology at Jefferson Medical College, Professor of Gynæcology.

Dr. Chas. M. Seltzer, Professor of Hygiene.

Dr. H. H. Boom, Adjunct Professor of Chemistry.

Dr. B. T. Shimwell, Adjunct Professor of Operative Surgery.

SURGEON WANTED FOR THE PEARY RELIEF EXPEDITION.

We understand that the surgeon for the Peary Relief Expedition, which is to start in the latter part of the present month, has not yet been selected. Those of our medical brethren who desire to avail themselves of the privilege of visiting the Arctic solitudes will do well to make early application to Prof. Angelo Heilprin, of the Academy of Natural Sciences, the leader of the Expedition.

AMERICAN NEUROLOGICAL ASSOCIATION.

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Clinical Lectures.

DISEASES OF THE JOINTS IN HÆMOPHILIACS, WITH SPECIAL REFERENCE TO DIAGNOSIS.

By DR. FRANZ KONIG,*
GÖTTINGEN, GERMANY.

Gentlemen:—Under the manifestations of that most peculiar and problematic disease, hæmophilia, there is not one perhaps that is of such importance to surgeons as that of bleeding into the synovial sac. While many chapters relating to hæmophilias, as for instance its ætiology, are still surrounded by the darkness of uncertainty, and the history of the disease in the family and its heredity is in no way understood, yet the clinical histories of those conditions of the joints, which we all want to designate as "bleeding joints" are very accessible, and may be easily obtained. To be sure it was a long time before the articular affection so common to hæmophiliacs, was recognized as a repeated bleeding into the synovial sac, or as a "bleeding joint."

The older authors of this century who have occupied themselves with this question, had a variety of opinions concerning both the nature and origin of the disease. Many attributed them to gout, a disease which they had opportunity of seeing a great deal of. Indeed, the knowledge of diseases of the joints being at that time very crude, nearly all such fell under the above heading. Some physicians, who had enjoyed larger experience recognized different varieties.

So Elsässer speaks of the gouty joints, but tells also of a patient, in whom after one joint became affected, developed a "*tumor albus*" at the knee, which after suitable treatment, such as rest and blisters, was ultimately cured.

We will see that Elsässer recognized various stages of the disease with correctness.

Wachsmuth, during the forties, was unable to see any difference between bleeding joints and articular rheumatism. He spoke of the disease in the joint as pseudo-rheumatism, and *rheumatismus spurius.*

Lange, in 1851, took a similar view of the affection. He interprets Elsässer's *tumor albus,* as a rheumatic tumor, with now greater and now less inflammatory manifestations. Finally, Grandidier, the physician and writer who made so extended a study of hæmophilias, in a monograph published in the seventies, ascribed the articular affections of hæmophiliac subjects to either gouty or rheumatic origins.

It was first during the sixties, that a few surgeons leaned towards the idea that the articular diseases in bleeders, at least in part, was due to a bleeding into the joint.

Richard von Volkmann, in his magnificent work on the diseases of the bones and joints, which appeared in 1868, said that both in hæmophilias and scorbutis, hæmarthrosis occurred either spontaneously or else with but very slight exciting cause. Reinert endeavored to prove most emphatically by the history of a very interesting case that the great majority of cases of bleeding-joints could be traced to intra-articular hæmorrhage.* Most emphatically also Lossen endeavored to turn aside the current idea of a uric acid diathesis or rheumatism in the bleeders. He explained that the "bleeders" joint was due to hæmorrhage into the synovial sac, and disturbance caused by this.

It is necessary thus to review the

*From *Volkmann's Collection of Clinical Lectures,* delivered before the Society of Natural Scientists, at Halle.

*Göttinger, 1869.

history of this disease in order to understand why it is yet, even among specialists, comparatively little known. The rarity of its occurance alone does not explain this.

As long as the profession remained of the opinion that bleeders were subject to various rheumatic, arthritic and other diseases of the joints, it did not seem worth the while to investigate these forms of otherwise well-known diseases. The question, however, assumed an entirely different aspect, when it was learned that the articular diseases of bleeders were entirely characteristic and distinct from others, and that their study offered a most interesting field for pathologico-anatomical research. Furthermore, that under certain circumstances their clinical study will enable the physician, from the character of the disease, to diagnose the hæmophilias as well as the bleeder's-joint, and many important points regarding the treatment may also be gleaned.

We are of the opinion that if physicians had a thorough understanding of the matter, it would be seen that the "bleeder's joint" was not such a rare affection as had been thought; especially may this be true since the clinical picture presented would almost justify a diagnosis of *tumor albus* (white swelling,) or articular tuberculosis. The possibility of such a diagnostic error can, as one can readily see, be a fatal mistake to the bleeder. Out of 8 bleeders with bleeder's-joints, which were treated during the last ten years at the clinic in Göttingen, two died from the results of a mistaken diagnosis, a surgical operation, for the relief of their condition having been attempted.

The object of this lecture is a practical one. It is designed to furnish the profession with a guard against similar mistakes to the above, which occurred to the writer.

Anyone who has stood helplessly by the bleeding operative wound of a hæmophiliac subject, and who has been forced to endure the sight of seeing such a subject die, before his very eyes, from a wound which he has inflicted with the best intentions—such a one will gratefully acknowledge the attempt that is made here; at least the attempt to render the diagnosis of bleeder's-joint a matter of possibility, if not certainty, in many cases.

The peculiar manifestations of a bleeder's-joint, not only those which occur at the first appearance of the hæmorrhage, but the many changing symptomatic pictures which occasionally assume a very chronic course, and are caused by the repeated hæmorrhages in the joint or joints.

To the hæmorrhages are added motor disturbances, and these, as we shall presently see, give rise to a typical inflammatory condition of the joint, which later may result in a loss of the joint, severe contractures, ankyloses, and great deformity.

According to this, we are justified in dividing the joint disease of the hæmophiliacs into three stages. The first stage is that of the first hæmorrhage into the joint. The clinical picture of this stage is that of a true hæmarthrosis. Of course, in certain cases and under certain circumstances the disease can end also with this stage, that is, the hæmarthrosis may be cured. If this is not the case the presence of the blood causes irritation, and there develops a peculiar form of inflammation, which develops as a panarthritis, and the pathalogico-anatomical as well as the clinical manifestations greatly resemble those of tuberculosis of the joint, especially that variety which is known by the name of *hydrops tuberculosus fibrinosus*. This stage might well be designated as the inflammatory stage, and it is certainly that stage which former authors have designated as white swelling, or *tumor albus*.

The third stage includes those regressive metamorphoses of the joint; the stage of pathological change of the joint, of adhesions, of displacement of the articular surfaces, of contractions, of ankylosis, and of deformities of the joint.

In brief, therefore, we can divide the course of the disease as follows:

1. The stage of the first hæmorrhage—the hæmarthrosis of bleeders.
2. The stage of inflammation—the panarthrosis in the bleeder's-joint.
3. The regressive stage—the stage which leads to permanent deformities of the bleeder's-joint — the contracted bleeder's-joint.

If we now turn to a consideration of the clinical manifestations of the bleeder's-joint, it need scarcely be said that a hæmorrhage which occurs spontaneously does not conduct itself with any material difference from one which is caused traumatically as is a rule, however, there is no traumatism in the case of the bleeders, and there must

be other grounds that will enable us to diagnose a discharge into the joint as a hæmorrhage. In this connetion it must be taken into consideration that the hæmorrhagic discharge into the joint of the bleeders occurs rapidly, similarly as though a traumatism had been effected. In individual cases subcutaneous ecchymoses may appear around the joint, or the green discoloration of the skin near the joint may point to the correct diagnosis. Naturally, the diagnosis will be greatly facilitated if it is previously known that the subject is a bleeder, or belongs to a bleeding family. In this connection I will introduce the clinical history of a patient treated by me during the last term:

Dr. H., seventeen years of age. The man was pale, and a few months previously had developed, quite suddenly, a painless swelling of the knee. The knee was slightly distended, fluctuated plainly and the patella vibrated. Up to the time of examination the patient had been able to use the leg without inconvenience; all normal movements were possible. While I was describing the case to the class, and laying particular stress upon the fact that the pallor of the patient and the sudden appearance of the disease, together with the retention of motor power and painlessness, led me to believe the case one of bleeder-joint, the patient interrupted me by saying, that his physician had cautioned him not to forget to mention that he came from a bleeder family. He himself, he added, bled profusely from the slightest wound and one of his family had a most severe hæmorrhage after the extraction of a tooth.

The trocar evacuated about 100 grammes of fluid blood; a compress was applied, and a protective apparatus made for the patient's knee. He was discharged cured.

As a rule, however, the surgeon does not see this first hæmorrhage, the first step of the disease, but meets with the manifestation described in our second, or inflammatory stage. We have already repeatedly called attention to the fact that the external symptomalogical and clinical picture of the bleeder's-joint is remarkably like that of fibrinous dropsical tuberculosis of the joint.

In the discussion of the pathological anatomy of the disease, the cause of this resemblance will at once be understood. Here we will only say that in both cases we are dealing with an effiux of fluid into the joint, from which fluid fibrinous matter is cast down, which in part remains free in the fluid, and in part deposits itself upon the surface of the joint, and partially, at least, becomes organized. Therefore, in both diseases we find a fluctuating enlargement of the joint with changeable thickening of the synovial membrane.

In the face of these facts one may well be uncertain as to whether it be at all possible to determine upon the correct diagnosis in such cases. We are also of the opinion that under certain circumstances this is impossible. If we know nothing of the history of the case, nothing of the manner in which this questionable disease of the joint has occurred, and above all, have no suspicion that the patient is a bleeder, but only that he has a diseased joint, then, indeed, even the most skillful specialist would fail to diagnose a case presenting the above symptomalogical picture as one of bleeder's joint.

We will now endeavor to discuss such points as may lead to the formation of a correct diagnosis. In the first case, it should be brought forward that youthful subjects, and male subjects at that, are those who are usually subject to the bleeder's-joint. The large majority of male subjects with bleeder's-joints, may be well explained by the large predominance of male bleeders, generally. To this should be added that, as a rule, the patient has a more or less striking paleness of the face. If added to these general symptoms, it happens that apart from the freshly inflamed joint the patient also has one or more deformed limbs that previously have been diseased, or indeed, if while the diagnostician is watching the case, a fresh hæmorrhage into the joint occurs, then the diagnosis of one of the progressive stages of bleeder's-joints becomes greatly strengthened. It becomes almost a certainty when the patient tells us that the first attack came on suddenly in the joint, and that the latter was painless, and primarilly functionally undisturbed, and that the regression has occurred gradually.

All these reasons for assuming the presence of bleeder's-joint, I have unfortunately had to learn through the sad experience of diagnostic mistakes of my own. I

feel that it will be instructive, if I here report the histories of a few of these cases.

In 1880 I received a boy for treatment, thirteen years old, Richard Rose by name. His father had died from consumption. He is said to have been well until about a year and a half before he came under treatment, when he acquired some disease of the left knee-joint. This would first grow better and then worse, but finally the swelling went down, the limb remaining partly flexed, and in a genu-valgum position. Simultaneously the left ankle-joint became diseased and the boy was compelled to walk on the toes of that foot. Three months after the left knee was attacked the right also became diseased. Upon admission the boy's condition was to all appearances that of dropsical tuberculosis of the joints. The joint fluctuated, and there was a knotty, crackling enlargement of the synovialis. During the course of treatment the elbow joint exhibited a passing swelling. No other symptoms of disease were found.

After many attempts to stretch the contracted knee-joint (the left) and to reduce the inflammatory swelling, I proceded to make an incision, feeling confident that I was dealing with a case of articular tuberculosis. The incision revealed the fact that I had to deal with a characteristic bleeder's-joint. I contented myself with draining the joint. On the third day, in spite of all efforts to check the uncontrolable hæmorrhage, the boy was a corpse.

The parents of the boy were both dead, and, therefore, the question of hæmophilias being in the family could not be answered. His mother had died shortly after his birth (from hæmorrhage ?).

The case occurred (in 1880) at a time when as yet I had seen but little of bleeder's-joints. But during the course of the same year I met with a second case and although several manifestations that should have led me to suspect bleeder's-joint were present, I failed to diagnose the case correctly, to the misfortune of the patient. The patient was a very pale boy, eight years old, whose parents were both dead. For three months he had suffered from a diseased knee-joint. The joint had a spindle-formed swelling, in the upper recess of which one could detect obscure fluctuation. A short time before the elbow joint also became swollen. Both joints were painful, and their motion impaired. After many curative attempts, the knee-joint was incised, with a view of resecting it. The first incision revealed clearly the presence of a bleeder's-joint, and in consequence the operation was abandoned, and the joint simply drained. In ten days the patient died from the effects of uncontrollable and repeated hæmorrhages, which persisted in spite of all that could be done.

The experience gained by this case at least sufficiently warned me not to make an incorrect diagnosis in the case of the boy's brother. He was also admitted a few days later, suffering from a joint disease that seemed to be of a tuberculosis origin, with contraction. His right knee was slightly flexed, and in the genu-valgum position, and the medial condyle was very prominent. The synovial swelling was slight. An attempt was made to correct the deformity and to fix the limb in a plaster of Paris bandage. Suddenly both elbows were similarly affected. The boy was eleven years old and very pale. In the meantime the brother had been operated upon and it was learned from evidence obtained from their home that they were from a bleeder family.

In distinction to these cases, the diagnosis of bleeder's-joint was made in the case of a man 23 years old, who simultaneously had tuberculosis (lupus of the face, and tubercular epidydimitis). When ten years old the patient developed a swelling of his left knee-joint. When fourteen years old his right knee became diseased, and while the trouble of the left knee ameliorated the right again became worse and finally ended in contraction and genu-valgum position. Also the left hip-joint had been filled with an effusion, which gradually receded.

I was informed that this patient also belonged to a bleeder family.

During the winter of 1890 to 1891, he was treated with Koch's lymyh for lupus and tuberculous epidydimitis. While the lupus and epidydimitis reacted intensely in response to the injections the joints showed no reaction. Here tuberculin undoubtedly proved that the joints were not tuberculous.

After the above details of symptomatology and diagnostic points, you see that we are in a position very frequently to diagnose the bleeder's-joint. We have already stated that if the disease occurs in the case of a known bleeder, or member of

a bleeder family, that the diagnosis is comparatively easy, and for certainty in such a case, it is only necessary to know that the swelling occurred very suddenly. If one knows nothing of the patients being a bleeder a correct diagnosis can frequently be made. An accurate diagnosis is possible when we meet with rapidly developing enlargements of the joints in pallid youthful subjects; furthermore by the simultaneous characteristics of other joints, and also by the ecchymoses and blue spots which appear upon the body of the patient.

We have gone so far as to show how we can be able to determine upon a correct diagnosis in recent cases of bleeder's-joint after the first hæmorrhage or hæmarthrosis, or after repeated hæmorrhages—panarthritis. On the contrary we have said nothing as to the recognition of the disease in its third or regressive stage.

In order to answer this question, or, indeed, to broaden our knowledge of bleeder's-joint we must look for a few moments at the pathological anatomy of the disease.

This we can do with the aid of two specimens I have at hand, since one can gain but little on the subject in medical literature, and as few if any pathologico-anatomical collections contain specimens of bleeder's joint. My preparations are unfortunately from the two cases that succumbed to my operative interference, and one from a man who lived after such an operation. The findings in each one are identical. All three are from knee joints. One was the subject of a long dissertation by Dr. Bockelmann, as long ago as 1881.

Proceeding from the earlier stages of the disease, the condition which is present a few weeks after the initial hæmorrhage into the joint, we find that the articular space is filled with fluid blood. Apart from this there are some clots, in part discolorized, some floating in the liquid, and others adherent to the capsule. The capsule itself is thickened, succulent, imbibed with blood coloring matter, and therefore discolored accordingly. At some places the fibrinous deposit has begun not only on the capsule but also upon typical places of the surface of the cartilage, sometimes upon the femur, from one side to the other of the upper surface of the cartilage. Here and there brownish pigmented tufts were beginning to form. At this time the cartilage also begins to degenerate, and to become ragged, and sharp-edged peculiar defects appear, which are described below.

The anatomical picture in the second stage of the disease, when it resembles fibrinous dropsical tuberculosis, is similar to the above, save that it is more advanced and greater changes have taken place. The contents of the joint, unless a fresh hæmorrhage has just occurred is not pure blood, but composed of bloody serum, or pure serum of a light brown color. Especially prominent to the eye when such a joint is cut open are the large numbers of floating, brownish, synovial tufts. In the joint of the child who was operated upon and died, the slightly thickened synovial membrane seemed overgrown with moss. In the fluid a large number of delicate brown tufts floated by each other like a Medusa's head, indeed the whole synovial membrane has this appearance, but the discoloration of this membrane varies, sometimes being reddish, brown or gray.

Besides these characteristic changes, the appearance of the surface of the cartilage is none the less peculiar. All over it has lost both its white color and gloss, it is now a dirty reddish-brown or gray. In some cases filiform masses seemed to have raised themselves from its surface, which seem to tend toward the formation of connecting tissue. They are of importance as forerunners of *synechia* in the joint. The principal characteristic changes are sharp-bordered defects of the cartilage, of a map-like appearance, some small and some large. These are found on different parts of the surface of the cartilage, but especially where these filiform masses are seen. Their cause I have not been able to discover. Changes of the articular surfaces of the cartilage, as seen in arthritis deformans are not met with here, although there were unevennesses in the cartilage's surface.

A bleeder's joint does not stay long in this stage, unless additional hæmorrhage occurs. As a rule, after the above anatomical picture the already mentioned regressive changes take place, and the tissues undergo a metamorphosis. There occur adhesions, formations of connective tissue, and contractions with deformity, which need not be further traced. But while the position resulting is not dissimilar to that caused by tuberculosis, yet there is no tendency to the formation of either ab-

scesses or fistulæ; on the contrary, healing often occurs with remarkable rapidity.

The first hæmorrhage into a joint is frequently followed by entire cure, and without leaving any trouble behind it; but I doubt, if the disease has once reached the second stage, that it can ever again become a perfectly mobile joint. To the prognosis must also be added the fact that as the patient is a bleeder, he will very likely get other bleeder's joints.

A fresh hæmartherosis in a bleeder should be so treated that the patient does not use the limb. If a lower limb is affected the patient must not walk, and if an arm is affected he must not use it. But, as a rule, he will disregard this injunction, since the first evidences of the disease are so slight as to be little thought of by the patient.

Moderate compression undoubtedly assists resorption, and I have frequently seen cures result from it.

In the second stage the matter is a different one, and on account of the inflammatory process and pain to the patient the question of operation comes to the fore, and with it the knowledge that we are dealing with a bleeder. I have used puncture in three cases without incurring any serious bleeding, and followed it by irrigation of the joint with carbolic acid solution. Two patients were cured and one improved.

But I would let all operative procedures cease here. Of the three cases in which I, owing to incorrect diagnosis, made an incision into the joint, two died, and one barely recovered.

The contractures may often be helped by plaster of Paris bandages or suitable mechanical appliance. The question "What is to be done in a case of bleeder's-joint?" sinks into utter insignificance in the face of the question "What *not* to do?"

The object of this clinical study is to cause greater familiarity with a not altogether rare disease, but, above all, to save the subject suffering from a bleeder's-joint from untimely death.

ARTICULAR RHEUMATISM.

The following (*Lo Sperimentale*, No. 3, 1892) is recommended as an application in articular rheumatism:

℞ Salol.....gms. 4 (ʒj.).
Ether.....gms. 4 (fl. ʒj).
Collodion.....gms. 30 (fl. ʒj).
Apply locally.

Communications.

TREATMENT OF SUMMER DIARRHŒA IN CHILDREN.

By ALICE McLEAN ROSS, M. D.,
PHYSICIAN TO BAPTIST HOSPITAL, SWATOW, CHINA.

Last summer, while physician to the Woman's Hospital of Detroit, I had exceptionally good results from the following plan of treatment for summer diarrhœa. My infant ward contained on an average forty-five babes, and at one time I had fourteen sick with cholera infantum but I had no deaths from this dread disease during the summer months. As the hot weather is approaching, it is appropriate to discuss this exceedingly prevalent malady.

At the onset of bowel trouble give ʒiss of castor oil to clear out the bowels thoroughly, and after every movement following that caused by the oil, give a teaspoonful of the following mixture:

℞ Bismuth. subnit.....gr. cccxx.
Acid. carbolic.....
Spt. menth. pip.....
Tinct. capsici.....
Spt. camphor.....
Syr. simplic.....
āā mx.
Aq. cinnamon.....āā qs. ad. ʒviii.

If movements are very frequent, the same dose may be given every 2h. When temperature runs over 102°F. and patient is pretty strong, give acetanilid gr. iss every 3 h. I have observed that the antipyretic effects of this drug last almost exactly 3 hours in children. If patient is weak, lower the temperature by sponge baths, and where fever runs below 102° F, substitute for these, aconite gr. $\frac{1}{15}$, every h. Spirit. frumenti is necessary in small frequent doses where exhaustion supervenes. Give every morning and evening, with soft rubber catheter, a high irrigation of starch water, warm, to which is added ʒss. soda bicarb. to the pint.

Children usually cry a great deal and it is the natural thing for the mother or nurse to give them their accustomed food to stop them. This must not be allowed. They are inclined to drink greedily and overload their already weakened stomachs, and aggravate their trouble. It is best to feed them at their accustomed times only, and give them plain cool boiled water to quench their thirst. Plenty of fresh air

is desirable, and a cool, even temperature is best. Upon very hot days it is well to remove the ordinary clothes and put on a light flannel night dress guarding against sudden changes of temperature, of course. I have tried other plans, but this gave very satisfactory results.

TREND OF MODERN NEUROLOGY*

By L. BREMER, M.D.,
ST. LOUIS, MO.

ABSTRACT OF REPORT ON PROGRESS IN NEUROLOGY.

Cerebral localization and its utilization for brain surgery is not now as much in the foreground of neurology as it has been in former years. Instead of this neuropathology and anatomy engage the attention of investigators. The "weeding-out" process of the neuroses in noseology is actively and successfully being pushed in the medical centers of the various countries. The number of the purely functional nervous disorders is constantly being diminished by the discovery of their etiological factors and their anatomical substratum. Even "idiopathic" epilepsy, so-called, seems to depend almost always on minute sclerotic patches in the brain which escape detection on naked eye examination. It stands to reason that the rest of the recognized neuroses, hysteria and neurasthenia, will follow suit in the course of time. Bacteriology has been most prominent in making inroads on the supposed functional nervous diseases.

New views and new fields for investigation have been opened by the discovery of the toxines (tetano-toxine, typho-toxine, etc.) and their elective affinity for certain nerve-centers and nerve-tracts.

The toxines led to the discovery of the auto-intoxications, which play such important part in initiative and paralytic nervous diseases.

The knowledge of such pathological conditions, due no doubt to a faulty or perverted metabolism, is of great practical import, affecting principally our notions as to dietetics in disease.

The existence and reality of such auto-intoxications seems to have been demonstrated in the various forms of insanity, in which the urine of the patients greatly exceeds in toxicity that of healthy individuals.

The attempts of some neurologists to annex even such diseases as tuberculosis or cholera, etc., as being nervous diseases, is to be deprecated, being in antagonism to our present accepted nosological and pathological conceptions.

Another divergent movement in neurology is hypnotism as a remedial agent. In the vast majority of cases, where it might perhaps be indicated, simple suggestion does all, and even more than hypnotism and the cultivation of a sanguine temperament in the neurologist will stand very well in place of what is, at best, a species of mummery savoring of and leading to humbuggery. The introduction of hypnosis as such into therapeusis is not to be classed as progress.

* Read before the Mo. State Med. Assoc., May 18, 1892.

CODEINE, ITS PHYSIOLOGICAL ACTION AND THERAPEUTICAL EMPLOYMENT.

Dr. William Heidingsfield, of Strassburg, reports (*Maug. Disser.*) on observations made at the Strassburg Insane Asylum, on twenty-four patients treated with codeine.

The usual dose was 0.02 gramme (⅓ grain) three times a day, in powders or in pills. He found that:

1. Codeine has very little or no anæsthetic action; as a rule, it disappointed in bodily pains, as well as in hysterical disturbances.

2. As a narcotic, it acts better in conditions of depression than in exaltation; but only when given in doses three to four times as large as narcotic doses of morphine. In acute mania, consequently, it is usually without effect.

3. In morphinism, its action is doubtful.

4. Codeine is to be recommended as an extremely prompt sedative in affections of the respiratory tract. It might also be employed where a medicament to quiet and to alleviate pain must be given continuously for a long time; or when a change of remedy is necessary in such cases.

5. Codeine is devoid of any injurious or even merely disagreeable accessory effects, aside from an occasional, slightly itching eruption, which, however, disappears in a few days.—*Merck's Bulletin.*

SOME POINTS IN THE SYMPTOMATOLOGY OF GENERAL PARALYSIS.*

By PHILIP ZENNER, A. M., M. D.,
CLINICAL LECTURER ON DISEASES OF THE NERVOUS SYSTEM IN THE MEDICAL COLLEGE, OF CIN., OHIO.

After some mention of causes of the disease a brief outline of symptoms was given. The latter are gradual failures of mental powers, attention, judgment, memory, the manifestation of delusions, especially delirium of grandeur, and motor symptoms, paresis of facial muscles, tremor of lips and tongue, a stammering speech, and sometimes spinal paralysis. There are sometimes attacks of acute mania, and paroxysms of an epileptic or apoplectic character. The average duration of the disease is three years. The earliest symptoms are most important to recognize, for if the disease be detected at an early period, financial calamities may sometimes be averted, and it is only then that anything could be hoped from treatment. Ordinarily the disease begins so insidiously that nothing is observed excepting by those coming most intimately in contact with the patient, and by them the changes are not attributed to disease; the early changes are impairment of powers of attention, of judgment, of quick perception, of memory for recent occurrences, etc. The affections become less strong, though the patient may be emotional, cry easily and the like. There is less attention paid ordinary ceremonials, to matters of dress, table manners, etc., and the patient often becomes indecent in his actions. There are usually some objective symptoms, even at an early period, such as tremor of the lips, and in equality of pupils. Spinal myosis is a very early and important symptom. The union of the latter and absent knee-jerks had been often seen in such cases by the writer.

The disease was often supposed to be ushered in abruptly with an attack of acute mania, when changes had taken place long prior to such an attack but their significance had not been recognized. The writer then reported such a case in which the condition of the pupils enabled him to make a correct diagnosis.

*Abstract of the paper read before the Ohio State Medical Society, May 6, 1892.

TREATMENT OF ORCHITIS AND EPIDIDYMITIS.*

By O. HASENCAMP, M. D.,
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When it is convenient for the patient, or the severity of his case demands that he rests in bed, the scrotum should be supported on a pillow or on a support placed across the thighs. At the beginning of the treatment, a good saline purgative should be administered, preceded by a large dose of calomel if a very active purge is needed. If there is much constitutional disturbance antiphlogistic remedies should be given. Tincture veratrum viride will reduce the heart's action. Acetanilid or phenacetin are useful to reduce the temperature and also relieve the pain to a certain extent. Aconite and antimony are also useful. Phytolacca and pulsatilla are said to have a specific effect in these troubles. Bromide of potash and opium are sometimes needed for rest and relieving pain. Local applications play an important rôle in the treatment, they relieve pain and are necessary to hasten a cure as constitutional remedies. Electricity is the best remedy we have in the treatment of these troubles, and one advantage is that it can be used in connection with any other method of treatment. The galvanic current should be used, the positive pole fitted with a cup or large sponge electrode applied over the enlargement and the negative pole over the abdomen or along the upper part of the spermatic cord, using from six to ten milliamperes for five to ten minutes at each treatment, which should be given at least once daily until relieved, using a suspensory bandage to support the testicle. This method of treatment is painless and that which pleases the patient best because he is not obliged to leave his business, and I have seldom found it necessary to order the patient to his bed or room. The trouble is generally relieved in from three to five days, and I have not had suppuration in any case of orchitis or epididymitis treated by electricity. Electricity, although most useful in acute and simple chronic cases, is very beneficial in enlargements caused by

*Read before the Ohio State Medical Society, May 5, 1892.

syphilitic and strumous conditions, but constitutional treatment is, of course, necessary. The application of cold is very useful in most cases. Orchitis due to metastasis is best treated by hot fomentations, in old and feeble subjects, when the circulation is poor, hot applications should be used in preference to cold. Cold can be supplied by the ice bag, Leiter's coils, cloths dipped in ice water, or cold evaporating lotions. To get the best results, cold should be applied as early in the disease as possible. In cases where there exists great pain, swelling or tension, local blood-letting or scarification may be resorted to. Painting with a strong solution of nitrate of silver (90 grs. to the ounce.) If there is fluid in the cavity of the tunica vaginalis a small trocar can be used to allow the fluid to escape. Pressure by elastic bag or stopping with plaster sometimes gives relief, but it is very troublesome, annoying and of doubtful utility. A treatment for epididymitis which has proven sucessful in my hands, although I have used it only a limited number of times, was given in a paper, read by Dr. G. E. Brewer before the American Association of Andrology and Syphilis, upon the treatment of epididymitis, and published in *The Philadelphia Medical News*, Oct. 1891. He called attention to this method of treatment that he had found very useful in both acute and chronic cases of this disease. The inflamed organ is covered with a thick layer of cotton wool which is surrounded by a layer of rubber tissue, extending beyond the wool to the healthy skin of the scrotum, a gauze bandage is next firmly applied and the whole is kept in place and supported by a suspensory bandage. It relieved the pain promptly and has a marked influence in promoting the rapid dissipation of the inflammatory induration.

In syphilitic orchitis specific constitutional treatment should be given in connection with local treatment. In malarial subjects quinine should be administered. Rheumatic patients should be given the salicylate of soda in ten grain doses every four hours. The diet should be light, principally milk, and animal food should be avoided. Tonics and alteratives should be used in the later stages of the disease and with hygienic measures be of assistance in completing the cure.

TREATMENT OF PNEUMONIA WITH REPORT OF CASES.*

By H. PERDUE, M. D.,

BARNESVILLE, GA.

Pneumonia holds a high position among the fatal diseases of the human race. Its victims yearly darken the plane of life from the palatial residence to poverty's hut. It claims a mighty host in the army of the dead.

While its mortality ranges from 3 to 35 per cent., its average under all circumstances, according to statistics is 20 per cent. or one out of every five. This stamps it as a fearful disease, and should claim our most serious attention and study. Human life is a precious gift from the hands of the Almighty, and it is an imperative duty to prolong it, if possible, to the extreme limit of old age.

Passing by the ætiology, pathology and diagnosis of this disease in its various forms, which being in recent works and accessible to all physicians, I shall devote my time in as concise a form as possible to the most successful methods of treatment, especially in my hands.

I shall consider principally acute croupous or lobar pneumonia. Taking as a definition of this disease that given by Dr. A. L. Loomis in his work on "Practical Medicine," viz., that it "is an acute general disease, characterized by an inflammation of the vesicular structures of the lungs with an exudation in the alveoli, which renders them impermeable to air," I shall proceed to give some of the points of treatment.

In the congestive stage, which lasts from one to three days, the patient is generally very restless, with high pyrexia, a sharp, stabbing pain beneath the nipple of the affected side, except in central pneumonia. Pleurisy, which gives so much pain, is said to be present in about 85 per cent. of all cases. In the beginning nausea and vomiting occur in about ¾ of the cases.

The first step to be taken is to relieve these distressing symptoms. Some give morphine hypodermically before the exudative process is completed. This will generally give quick relief, the thing so much desired by the patient, but I gener-

*Read before the Ga. State Medical Association, April 21, 1892.

ally prefer phenacetine, as some people do not bear opiates well. It reduces the fever, produces sweating, and gives ease. It is, in my opinion, *the* remedy *par excellence* at this period. I give it in nearly all cases, except the very old, the very young, and the very feeble, always giving alcoholics with it. I have many a time with it had my patients resting quietly and asleep 20 to 30 minutes. Five grains is the average dose for adults; about four hours apart. In a very few cases six grains will be required, and occasionally four grains will prove to be enough. The second dose may have to be given in two or three hours. The guide for diminishing or increasing the dose is the reduction of temperature produced. Sleeping and sweating are the conditions desired. I once gave 7½ to 8 grains of this medicine at a dose, but am now satisfied that five grains with whiskey should be the average dose. Sometimes it is more effective, as well as satisfactory, to give a smaller dose, and at shorter intervals. Some use cold applications to reduce the fever and give ease. Believing that the inconvenience, exposure and depressing effects are too great, I have never tried it. American practitioners are generally against it.

Some give large doses of quinine to reduce the fever. I have tried it to some extent, but like my present method better.

As soon as located some counter-irritant or soothing application should envelop the affected side, and, if the inflammation is in both lungs, the whole chest should be encased. That application may be a hot poultice, spongio-piline or cotton-batting covered with oil silk, a flannel cloth saturated with spirits of turpentine, or a mustard plaster. These should be renewed from time to time.

After some rest has been obtained, if the patient has not already been purged, it is well to give a dose of calomel. Sometimes we find a patient in great peril from venous engorgement and exhaustion of the right heart in its efforts to propel the venous blood through the capillaries of the lungs.

Formerly, to relieve this distressing symptom, venesection was practised by some, removing a portion of the venous blood; but that has been abandoned, on account of its depressing effect.

The effect of the nitrites in dilating the arterioles meets the urgent demand. Nitro-glycerine especially fulfills the indication. It is a valuable fact that it is as quickly absorbed through the stomach as when given hypodermically. It does its work quickly. On wings of mercy it flies to the rescue of the beleaguered one, unlocks the pent-up channels, and permits the waste product of the venous blood to become purified in the lungs, and the pure life-giving liquid to go on in its mission of love. It should be given in doses of $\frac{1}{100}$ gr., and be repeated in twenty or thirty minutes, if necessary, and afterwards every two or three hours as long as needed.

I always give strychnia in $\frac{1}{60}$ gr. dose, and atropia in $\frac{1}{100}$ gr. dose in this condition at the same time. They are heart and respiratory stimulants, and should be continued about four hours apart until this condition is well relieved. The strychnia, generally, should be continued through the whole disease. It strengthens and sustains the tired and flagging heart until recuperating nature comes to the rescue.

I have used, in nearly all my cases of lobar pneumonia, this season, the peroxide of hydrogen, and with good effect, I am sure. It was given for its germicidal properties, the oxygen it furnished the patients, exhilarating and strengthening them. The most remarkable therapeutic effects of this remedy in this disease that I have seen is from Dr. J. L. Green of Colorado. It is to be found in the "*Medical Record*," of New York, Feb. 6th, 1892. All of his uncomplicated cases, which were more than 150, got well. I have been giving one teaspoonful of Marchand's preparation in an ounce or two of water every ½ hour or hour. When the patient is evidently better, to prevent worrying him too much, it was given further apart. If it nauseates, and sometimes it does, the quantity should be diminished. I feel confident it has saved valuable lives. Any other good preparations of the peroxide, no doubt, would do the same.

Throughout the stages of congestion and consolidation, phenacetine in 5 gr. doses should be given in connection with whiskey, or milk punch every four hours, unless the temperature should get below 103° F. Midway between I generally give carbonate or muriate of ammo. with prun. virg. and syr. senega. In all bad cases, it is good policy to continue the peroxide about two hours apart. It hastens the crisis.

If the patient is disposed to be very

restless, and the phenacetine does not keep him quiet, I sometimes give the spts. eth. co. in teaspoonful doses. If it becomes very necessary that he should have something else to produce sleep, chloral in 8 to 12 gr. doses is an excellent remedy. If he has not had whiskey sufficiently, it should precede the chloral to prevent its depressing effects.

The patient should be kept in bed and not disturbed by conversation in the room. He should have rest, to conserve the power of nature. Good nursing is a very important part in the management of pneumonia patients.

A nutritious liquid diet, such as sweet milk, beef tea and palatable broths should be given. Sometimes the nausea is so great that patients will not readily take the diet named above. I have found Reed & Carnrick's Kumysgen, claimed to be a product of pure sweet milk, to be well borne and to sustain the patient.

The room of the patient should have fresh air throughout the whole treatment, and should be kept at a temperature of 65° to 70° F. In convalescence, stimulating expectorants and tonics are indicated.

In catarrhal pneumonia, the supporting treatment should be given from the beginning. Liquid diet, principally, should be given frequently, as the patient will not generally take much at a time. Patients should take stimulants from the beginning, and continue them throughout the treatment. I generally give carb. or muriate of ammonia during the entire treatment. Quinine is a very valuable remedy in reducing the temperature, and as an aid to resolution.

Mild mustard poultices or plasters to the chest are very valuable; also flannel cloths or jackets saturated with turpentine, diluted with oil if the patient is a child.

Great care should be exercised in convalescence to prevent a relapse or second attack.

REPORT OF CASES.

Before I begin this report I wish to state that my partner, Dr. M. A. Clark, and I visited all of these cases, sometimes together and sometimes separately, and were in perfect accord in their management.

Since the first of January we have had besides several of the lobular variety, fifteen cases of the lobar. Three of the lobar class had one lobe of the lungs affected, four had two, seven had three, and one had four. This shows an unusual *pro rata* number of the lobes attacked, yet we have not lost a *single* case. To prevent the lengthening out of this paper I will report only two cases.

Case I. January 24th. J. C. B., male, white, age 75, had bronchitis for 20 years, had *la grippe* recently, and was just beginning to sit up from it. Had a chill night before. Was called at 3 P. M. Could not take his temperature on account of extreme nervousness. Inspection showed diminished breathing on right side, and increased on left. Palpation, increased vocal fremitus on right side. Percussion, beginning dullness over lowest lobe of right lung. Auscultation, numerous crepitant râles over middle right lobe. Pulse, 120; respiration, 38. Put him on phenacetine grs. 5, every 4 hours, with whiskey and milk; also ammonia carb. grs. 5, syr., synegæ m, 10, syr. prun. virg., ℥ss. aquae qs. ad., ℥i. To be taken in water between doses of the other medicine. 8 P. M. dullness over middle and lowest lobes of right lung, bronchophony, crepitant râles over left lower lobes showing very rapid spread of trouble. Patient unconscious and very restless. Had the lungs completely enveloped in turpentine chloths. On account of extreme restlessness, added morph. sul., $\frac{1}{16}$ gr. to each dose of cough mixture.

January 25th, 8 A. M. Right, middle and lowest lobes solidified, and upper lobe of same side evidently involved. Left lower lobe solidified. Pulse, 140. Pespiration, 48. Had a bad night, but somewhat more quiet this morning. Continued former treatment except stopped phenacetine. Prescribed Marchand's peroxide of hydrogen, one teaspoonful in water every ½ hour or hour between doses of other medicines. Three P. M. Slightly more quiet. Eight P. M. Resting more quietly. Not so hot. Unconscious. Stopped morphine.

January 26th, 8 A. M. Spent a bad night. Occasional muttering, very restless, pulse and respiration very rapid. Increased the milk punch. Put him on atropia sul. gr. $\frac{1}{100}$ and strychnia, $\frac{1}{60}$ every 4 hours. Seven P. M. Very restless, low muttering delirium, carphologia, subsultus tendinum, sordes, pulse very rapid and respiration labored, lips livid. Gave cal-

omel, grs. 30, for its sedative effect. Returned in 2 hours, found him sleeping quietly, but heart labored and respiration difficult. On awaking he was given nitro-glycerine, gr. $\frac{1}{100}$, and repeated in ½ hour, and after that 4 hours apart. Continued other medicines.

January 27th, 8 P. M. More quiet. Left off nitro-glycerine. Continued other treatment. Besides milk punch, gave beef peptonoids. Eight P. M. More restless. respiration labored, venous engorgement. Put him on nitro-glycerine again. Reduced atropia to $\frac{1}{150}$ gr.

January 28th, 8 A. M.—Rested better during the night. Continued same treatment. 7 P. M.—Rested much better during the day. Stopped nitro-glycerine.

January 29th, 8 A. M.—Death seemed imminent from exhaustion. Pushed nourishment and whiskey to the exclusion of medicines. 7 P. M.—More quiet every way.

January 30th, 8 A. M.—Rested tolerably well during the night. Dropped the atropia, but continued the strychnia, the ammonia mixture, and peroxide of hydrogen as regularly as could without disturbing him too much. 7 P. M.—Better.

January 31st, 8 A. M.—Very much better. Continued to visit him until March 9th, when he was dismissed as safe after visiting him seventeen days.

Case II.—Harry A., male, white, age 17, family history good, previous health good. Had *la grippe* with acute gastritis just preceding this attack.

February 6th, 4 P. M.—Found lowest and middle lobes of right lung involved. Temperature 105° F. Gave phenacetine, grs. five, every four hours to reduce fever. Patient being very nervous and restless, gave chloral hydrate, grs. 7½, to be repeated every two to four hours as needed to make rest. Gave Mallinkrot's peroxide of hydrogen, ℥ss in water every one or two hours. Had whole chest completely enveloped in turpentine cloths.

February 7th, 9 A. M.—Temperature 104.5° F. Respiration 28. Pulse 120. Still restless. Continued phenacetine. Gave ammon. carb., grs. v., syr. senegæ, m x., syr. prun. virg., aquæ aa℥ss every four hours. Milk punch every four hours, following each dose of phenacetine. Continued peroxide. 2 P. M.—Temperature 105° F., though we had continued phenacetine, which produced profuse sweating; changed to 3 grs. every three hours. Continued ammon. mixture. Left off chloral as he was resting better.

February 8th, 8 A. M.—Temperature 103.5° F. Respiration 28. Pulse 120. Two lowest lobes of right lung completely consolidated. Crepitant râles in upper left lobe. Continued same treatment. Sweating not quite so profuse as before, but still too great. Gave atropia sul. gr. $\frac{1}{200}$ every four hours to check excessive sweating. 3 P. M.—Temperature 104.5° F. Upper left lobe in second stage. Pulse weak and rapid, and respiration labored. Sweating not so great. Stopped atropia separately, and gave in combination atropia sul., gr. $\frac{1}{200}$, and strychnia, gr. $\frac{1}{60}$ every four hours. Left off peroxide during night, with instructions to begin again in the morning.

February 9th.—Temperature 103.5° F. Continued treatment. 3 P. M.—Temperature 103.5° F. Resting quietly; respiration and pulse showing some improvement. Left off peroxide after bedtime, so as not to disturb sleep.

February 10th, 8 A. M.—Temperature 102° F. Left off strychnia and atropia, but continued ammonia, whiskey and peroxide. Left off phenacetine, as temperature was below 103° F. 3 P. M.—Temperature 102.5° F. Resolution beginning in lowest right lobe.

February 11th, 8 A. M.—Temperature 101.5°. Better every way. 3 P. M.—Temperature 102°. Continued ammonia, milk punch and peroxide.

February 12th, 8 A. M.—Temperature 99°. General resolution over whole of affected area. Continued treatment.

February 13th.—Temperature normal. Continued to visit him till February 15th, when he was dismissed as safe after visiting him 10 days.

PREVENTION OF COCAINE POISONING.

Smith recommends that patients be prepared by giving them a drop of one per cent. alcoholic solution of trinitrine a minute before administering the cocaine, repeating the dose at intervals if the pulse be not affected and no pain of fulness in the temporal region be felt. The trinitrine acts almost as rapidly and continues to affect the vaso-dilators for upwards of half an hour longer than nitrite of amyl.

Society Reports.

THE MEDICO-CHIRURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting May 13, 1892.

Dr. Wm. Cheatham, President, in the Chair.

SUPRA-PUBIC CYSTOTOMY FOR ENLARGED PROSTATE.

Dr. A. M. Vance: I will report a case of considerable interest. About five weeks ago I was called by Dr. Bates to see a patient seventy-eight years of age, who had been for three years subject to bladder trouble. He had occasional attacks of retention of the urine, due to enlarged prostate. The day I saw the case, the patient had ridden fifteen miles, was suffering greatly and could not empty his bladder. Previous to my seeing him, several physicians had failed to relieve by catheterization I at once aspirated the bladder, and, afterward, repeated the operation fifteen times. Then a supra-pubic cystotomy was done making the incision through the site of these sixteen aspirations. The bladder was emptied and washed out. Case progressed nicely for seven days, wound did well, had primary union. The patient was allowed to walk about. On the eighth day, however, he died suddenly, probably from heart clot. No post-mortem examination was made. There was some induration around the site of the punctures. No urine passed through the urethra after the operation.

Dr. A. M. Cartledge: The case related by Dr. Vance gives us something new to talk about. The treatment of enlarged prostate is very varied. I believe that we have especially struck a new era for dealing with enlarged prostate in old people. The question to be decided is when, and in what cases, are radical measures justifiable. It has been the rule in my practice, after failing to introduce a catheter, to aspirate, then give cathartics, quinine etc. together with hot applications. This plan usually gives relief and the bladder for some time afterward can be emptied by catheter. The attacks of retention, however, will generally recur, and the patient dies usually in the third attack. I think it time to formulate this rule: If, after an hour or two, the catheter cannot be passed, then do a supra-pubic cystotomy at once. In my opinion the operation is often put off too long in these cases.

Dr. E. R. Palmer: Dr. Watson has written the best article on enlarged prostate that I have ever read. In these cases there are so many collateral troubles that the patients are usually ready to die, and, if an operation is done, the knife gets the credit of killing them. There are nearly always degenerate changes in the mucous membrane of the bladder, ureter, pelvis of the kidney, and in the structure of the kidney itself, consequently, an operation is badly borne. I like the perineal operation in middle life; in old men, the operation ought to be the supra-pubic. The operation ought to be regarded as the first, rather than the last resort.

Dr. W. O. Roberts: I strongly advise the supra-pubic operation to relieve retention of the urine from enlarged prostate. The retention is apt to recur often, and each time damages the case. The operation is simple, and when done early gives excellent results. Dr. Davis read a paper before the Southern Surgical Association in which he stated that it was his rule, when called to a case of retention due to enlarged prostate, to operate at once. Dr. Davis first passed a large trocar, then withdraws and inserts a catheter. Later on he uses a tube, the outer end of which can be closed by a cork. I have operated once according to the plan of Dr. Davis, using a large trocar and then inserting a No. 12 catheter. I think, however, there is always danger of introducing germs when catheters are used.

Dr. Wm. Bailey: I have recently seen two cases of retention of urine. both of which were relieved by the hot bath. In one case, where the patient was under forty-years of age, the tumor extended above the umbilicus. There was a history of gonorrhœa. I passed a soft catheter and only removed one drachm of urine. I thought I had not reached the bladder, but only a little sac in the urethra with the catheter. I then placed the patient in a hot bath, and the tumor disappeared without the patient being conscious that he had passed any urine. I believe that it is oftentimes better to temporize than to subject an old man to a capital operation. I think, however, that cystotomy is a less evil than repeated catheterization.

Dr. J. W. Irwin: I commend all that

Dr. Bailey has said on this subject. I have never seen a case of retention in an old man in which I have not been able to enter the bladder without restorting to a cutting operation. In case an operation is imperative, I prefer the operation through the perineum, rather than the supra-pubic, because it establishes drainage. In these cases there is always more or less muco-pus, and this cannot be emptied through the supra-pubic opening. I believe that I have prolonged the life of many patients by not performing any surgical operation.

OPERATIONS IN NEW YORK HOSPITALS.

Dr. W. O. Roberts: Having just returned from New York, I have been requested by our Honorable President, and several Fellows of the Society, to give a short resumé of my trip, and of the operations I witnessed in the East.

I saw Dr. Polk, at Bellevue Hospital, operate for fibroid of the uterus. He did a hysterectomy according to Freund's method. Used drainage tube and packed the vagina with iodofom gauze. The patient's temperature was 100° on second day, afterwards was normal. Dr. Polk does this operation in all cases of fibroid tumors of the uterus, when they give rise to symptoms. In case of chronic endometritis, Dr. Polk first dilates the cervical canal by Goodell's dilator, then scrapes the cavity of the body with a sharp curette, after which he washes out the cavity and packs it through a speculum with iodofom gauze; he also plugs the vagina with the same material. This vaginal plug is removed on third day and the canal douched. The uterine plug is allowed to remain one week. All the cases got well under this treatment.

At the Hospital for the Ruptured and Crippled, I saw Dr. Gibney do a number of tenotomies for deformities of the neck, foot and hand; he employs the subcutaneous method. Many surgeons in New York, however, do the open operation, even when the tendo-achillis has to be cut. Dr. Abbe employs the open method. Saw Dr. Abbe tie a fractured patella with subcutaneous ligature, after which the leg was put in fixed dressing.

At Presbyterian Hospital, Whitehead's operation, also an operation for hare-lip, were witnessed, Dr. McCosh being the operator.

Saw Dr. McBurnie do an amputation: Case was a young woman with an enlarged leg from middle of thigh to toes; marked hyperæsthesia in the limbs. Diagnosis not made. A circular amputation of thigh was done, hæmorrhage in the case controlled by digital compression of femoral artery. The amount of blood lost was very small.

In skin grafting operations, Dr. McBurnie frequently uses grafts four inches long. He first places, the grafts in a salt solution (.6 of 1 per cent.), and, after applying them to the wound, covers them with sterilized gauze which has been previously soaked in the same solution. Around this is put absorbent cotton. The dressing is changed every forty-eight hours, except the rubber tissue which covers the drafts, this is allowed to remain seven days.

Saw Dr. McBurnie remove a portion of a very large thyroid gland, which was interfering with the respiratory act. A large number of vessels were ligatured before cutting. The enlargement proved to be cystic.

While in Philadelphia, visited Dr. Pierce and Dr. Goodell and witnessed several of their operations.

REMOVAL OF ENLARGED INGUINAL GLAND.

Dr. W. L. Rodman:—The specimen I have to exhibit is an enlarged gland removed from the inguinal region. The patient was a young man eighteen years of age, and the tumor before removal looked to be as large as a duck's egg. There was no suppuration. I removed all of the superficial inguinal glands, and the largest (which you see here) was close to the femoral artery. In dissecting it I used my fingers very largely. Some of the glands were almost ready to break down. I would advise this operation as the quickest way to cure these cases.

Dr. T. L. McDermott:—I have seen three cases of bubo of non-venereal origin during the last ten days.

Dr. E. R. Palmer:—I regard the surgery of bubo faulty, and think that the whole literature concerning its surgical treatment ought to be re-written. I agree with Dr. Rodman in advising enucleation. I strongly condemn the modern practice of removing the roof of the bubo, curetting, packing and leaving it to granulate. This always leaves a large unsightly scar. I always urge enucleation in non-venereal enlarged inguinal glands, and, believe, that it shortens what would otherwise be a tedious recovery.

Dr. H. A. Cottell:—Two or three years ago, I published from advance sheets, an article of some English surgeon, in which he advised the early removal of these glands, especially those about the neck.

I believe, however, that enlarged lymphatics, non-venereal in origin, do not require surgical interference, but can be made to resolve under alteratives and appropriate local applications.

PERIARTICULAR INJECTIONS OF CHLORIDE OF ZINC IN RECURRENT DISLOCATION OF THE SHOULDER.

Dubrueil (*Sem. Méd.* February 27th, 1892) relates the case of a muscular man, aged 40, who was subject to frequent dislocation of the shoulder, which made it difficult for him to earn his living. The accident occured five times in two and a half months, owing to such apparently inadequate causes as throwing a stone, sudden abduction of the arm, etc. It occurred to Dubrueil to try the effect of chloride of zinc injections, such as Lannelongue has found so successful in tuberculous inflammations of joints. (See *British Medical Journal*, 1891, vol. ii, p. 86). His idea was that the chloride of zinc would have a "sclerogenic" effect on the tissues about the shoulder-joint, thickening, tightening, and strengthening the capsule. Between January 5th and 16th he made six injections of 2 drops of a 1 in 10 solution of chloride of zinc at various points of the superior and anterior part of the shoulder underneath the acromion. Strict antiseptic precautions were taken both before and after the injection, and the point of the syringe was thrust into the tissues deep enough for the chloride of zinc solution to come into contact with the capsule. The injections caused only a trifling amount of pain, and were never followed by reaction. After the sixth injection the patient was directed to assist in the work of the ward, and in particular not to spare his shoulder. He was also made to perform violent movements of abduction and circumduction of the point in presence of the surgeon, but no luxation took place, and he was discharged on January 28th, with his shoulder apparently perfectly sound. Dubrueil thinks it probable that the cure will be permanent, and recommends the method as, at any rate, easy and harmless.—*Brit. Med. Jour.*

Selected Formulæ.

OTALGIA.

Dr. A. Dixon (*The Prescription*, No. 1, 1892) employs the following:

℞ Cocain. muriat. (4 per cent. sol.).....fl. ʒj.

Drop three or four drops into the patient's ear. Repeat in fifteen minutes if not better.

COUGH OF PHTHISIS.

Professor Pepper states that inhalations are to be preferred in the paroxysms of cough. He has found the following formula of service:

℞ Creasoti.....ʒj.
Tr. iodi.....ʒiij.
Chloroform.....ʒij.
Sp. vini rect.....q. s. ad. ʒj.
M. Sig.—Inhale 10 drops.

Carbolic acid, in somewhat smaller dose, or thymol may be substituted for the creasote, and tincture of conium for the chloroform.

PRURITIS.

℞ Menthol..... 4 grms.
Alcohol..... 30 grms.
Water..... 60 grms.
Acetic acid.....150 grms.
M. Sig.—Apply with a sponge.

—*Le Progrès Médical.*

DYSPNŒA OF HEART DISEASE.

Little, in the *Birmingham Medical Review*, states that he has employed for many years the following solution in the hypodermic treatment of the dyspnœa of cardiac disease:

℞ Sulphate of morphine.....gr. iv.
Hydrate of chloral.....gr. ii.
Atropine sulphate.....1-10 gr.
Camphor water, enough to make 4 drachms.
Sig.—Fifteen minims at a dose.

The chloral is added merely to make the solution keep. It renders the injection slightly painful, and may be left out if the liquid is to be used within two or three weeks of the time that it is prepared.

LEMON TONIC (CHARITY HOSPITAL).

℞ Cinchonine sulphate.....30 grains.
Citric acid.....30 grains.
Tinct. chlor. iron.....30 minims.
Syrup.....1½ fluid ounces.
Water to make.....4 fluid ounces.—M.
Dose.—A teaspoonful.

INJECTION OF AMMONIA-CITRATE OF IRON IN CHLOROSIS.

Dr. Alvazzi, of Turin, has successfully used the following formula:

℞ Ammonio-citrate of iron.....1.20 grms.
Distilled water.
Laurel water.....āā 5.00 grms.—M.

The Pravaz syringe was used, the dose in the beginning being 2 centigrammes of the salt, once daily, gradually increased to 12 centigrammes.

ANTISEPTIC MOUTH WASH.

℞ Acidi thymici..... 0.25 grams.
Acidi benzoici..... 3. "
Tincturæ Eucalypti..... 15. "
Spiritus vini rectificati.....100. "
Essentiæ menthæ piperitæ..... 0.75. "
M. Sig.—Drop enough into a glass of water to cause turbidity, and rinse the mouth morning and night.

—*Muller.*

A REFRESHING BEVERAGE.

Bamberger (*Formulaire de la Fac. de Méd. de Vienne*) suggests the following potion to quench the thirst of pneumonia patients:

℞ 1. Acidi phosphorici..... 8 grammes (ʒij).
Syrupi rubi idæi..... 90 grammes (ʒiij).
M. Sig —To be taken in water.

℞ 2. Potassii bitartratis..... 8 grammes (ʒij).
Syrupi rubi idæi..... 40 grammes (ʒx).
Aquæ.....400 grammes (ʒxiiss).
M. Sig.—Use as a refreshing drink.

—*Le Progrès Médical*, February 6, 1892, p. 109.

DIPHTHERIA.

Dr. T. M. Culver (*Med. Free Press*, 1891, ix., 211.) says the patient should be completely isolated, the room maintained at a temperature of 70°, and kept moist with steam. Bowels kept open and chlorate of potash water given as a drink.

Internally,

℞ Hydrarg. bichlor..... ...gr. j.
Ess. pepsin.....ʒss.
Elix. simpl, q. s. ad.....ʒjv.
M. Sig.—Teaspoonful every two hours.

Locally,

℞ Papoid.....ʒj.
Sal. lister.....ʒij.
M. Sig.—Blow x grs. in throat every two hours.

Out of a record of forty cases treated as above, thirty-five recovered. In two cases the larynx was so seriously involved that intubation was done. Of these cases, one recovered and the other died of heart failure.

DIARRHŒA.

℞ Salol.....ʒij.
Bismuthi subnitratis.....ʒiv.
Mist. cretæ.....q. s. ad. ʒiij.
M. Sig.—One teaspoonful every two hours.

OCCUPATION FOR THE FEEBLE-MINDED.

From time to time we are reminded by by its effects upon social or political conditions that the thinking power of Birmingham is not bounded in its applications even by the wide circle of its varied industries. Art and science have been appreciably indebted to its influence. It is, however, especially in the guidance and reform of civic and social usages that we are accostomed to trace the effects of this healthily active leauen. By way of illustrations, we may mention a recent project which owes its rise to the kind originality of a ladies' committee. There exists in the hardware capital, as in order cities, a residuum of mentally weak but not incapable persons. Overmatched intellectually by the average man or woman, they have no definite position or sphere of usefulness among their neighbors, and are consequently as a rule dependent either on friendly maintenance or on parish relief. The committee already mentioned has taken account of these poor people, or more strictly, of the women among them, and has organised for them a system of profitable employment. This consists in the establishment of a laundry with adjacent cottage homes. The household and working expenses of the institution are to be defrayed partly by the earnings of the inmates and partly by subscriptions paid by their relatives or by parochial guardians. In this way their intellectual talent, however meagre, will be utilised, and it is at least probable that an effectual check will be placed upon the reproduction by such persons of a progeny as lacking in parental care as in mental capacity. There is also a very fair prospects that the mere process of employment will do something to awaken and strengthen the dull faculties of these semi-imbeciles. Eve[illegible] true friend of his species will therefor[illegible]sh well to the Birmingham experi[illegible]ment, which might even be extended to meet the case of half-witted men, and which, if successful, will certainly not fail to be repeate[illegible] in the social usage of other communities.—*Lancet.*

THE

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Leading Articles.

THE THERAPY AND ÆTIOLOGY OF ACUTE DIGESTIVE DISTURBANCES OF CHILDHOOD.

When the still enormous death-rate among children and infants is contemplated, and at the same time it is known that a large number of these deaths are directly or indirectly due to some acute digestive disturbance, then anything that tends to throw any light upon the subject cannot fail to awaken the keen interest of every practitioner. True, our increased knowledge of the hygiene of childhood, and especially of infant dietetics, has materially increased the chances of life of such children as come under our care, yet even our present therapeutic means are far from being all that could be desired, and the experiences of those who have made this subject one of special study must be of immediate value.

Dr. Sonnenberger, of Worms, in an article on acute digestive disturbances of childhood, especially cholera infantum, which appeared in a recent number of the *Allegemeine Medicinische Central-Zeitung*, speaks extensively of his experiences with resorcin in these and kindred troubles. It has been some time since Dr. Frühwald called the attention of German physicians to the value of this drug, laying special stress upon its happy action in those digestive disturbances of childhood accompanied with vomiting, and especially on its value in cholera infantum. Since that time, which is now several years ago, Dr. Sonnenberger has been constantly using the drug in these ailments in the St. Anna's Children's Hospital of Vienna, and in the majority of cases has had occasion to be more than satisfied with its prompt and efficient action. Especially in cases of obstinate vomiting can one rely upon its efficiency. Nor has Dr. Sonnenberger been alone in his high opinion of the value of

this drug, for Dr. Menche, a German pædiatrist of note, has recently contributed an article to the *Centralblatt fur Klin. Medicin*, entitled "Nine Year's Experience with Resorcin as an Internal Medicament," which is an encomium of the therapeutic value of this agent.

Until recently the therapy of acute digestive derangements of children has been rather uncertain, and guided more by individual than general experience. The use of calomel in cholera infantum is certainly of great value, but the most threatening and dangerous symptom—the vomiting—is not always checked by it, and for this very symptom we have a most prompt and efficacious remedy in resorcin. In doses varying from 0.15 to 0.20 gramme daily, resorcin never gives rise to any symptoms of poisoning or intolerance. Upon the diarrhœa it seems to exert but little influence, so that in the therapy of cholera infantum an astringent should also be administered.

Considering that resorcin has such valuable properties it is rather surprising that its use in this class of cases is almost wholly unknown. It is equally surprising that the majority of writers on pædiatrics have completely overlooked the drug, although this may be explained by the fact that as in large doses it is apt to cause toxic symptoms writers have hesitated to recommend it. Among authors who refer to it are—Bredent (*Lehrbuch für Kinderkrankheiten*); Epstein, in a recent work (*Uber das Wesen und Behandlung der Cholera Infantum*, who discards its use altogether, as being a dangerous drug in infancy; Baginsky, in the first edition of his well-known work, (*Lehrbuch fur Kinderkrankheiten*), who speaks of its efficacy, yet refers with caution to its powerful toxic properties, but in the third edition of the same work he makes no reference to the drug whatever.

These fears of a possible poisoning, we are told by Menche, are without foundation when the drug's use is confined to the daily dose of 0.1 to 0.12 gramme during the first months and 0.15 to 0.2 gramme for older children. Similar doses are recommended by Seifert in his work on Children's Diseases, and by H. Guttmann in his book on the same subject. Sonneberger, Menche, Fruhard, and Concetti (who used it even in larger doses in whooping-cough), who constitute the authorities who have used the drug and given it the most careful study, have never observed the slightest unpleasant symptoms accompanying or following its use when employed in the above named doses. The danger of possible poisoning is greatly lessened by the use of a pure drug.

It has been recently conceded that opium should never be given alone in acute digestive disturbances of children, but always in conjunction with some disinfectant. Moreover, the use of this drug in infants should be restricted to very small doses, never exceeding one or two drops of the tincture per diem. Many of the most recent writers discard opium entirely. Liebermeister, for instance, asserts that in children under one year of age opium should never be used, claiming that even when given in minimum doses so small that no beneficial action can be obtained, there is possible danger. He substitutes the tincture of nux vomica, and in cases of cholera infantum in infants about six months old uses the following formula:

℞ Sodii bicarb .....2 grams.
Tinct. nucis vomica,.....gtt V
Aquæ foeniculi.....60 grams
Sacch. alba.....5 grams.
M. Sig. One half teaspoonful every half hour

The use of opium is attended with far greater danger in children than in adults, and symptoms of poisoning and collapse are only too easily produced, especially as in these cases of digestive derangement there is a tendency to collapse. Sonnenberger reports a case of severe opium poisoning, which fortunately terminated favorably, in a child one and a half years

old, that had been given seven drops in the course of a day and a half of the simple tincture of opium. If opium be given at all it should be only in those cases in which there is no tendency to collapse. Seifert, the eminent German pædiatrist, gives the following table of doses:

For children up to one year of age ½ to 1 drop of the simple tincture of opium daily; from one to two years of age, 1 to 2 drops, always in combination.

The formula in which Sonnenberger has so successfully employed resorcin is as follows:

℞ Resorcin pur..... 0.1-0.25 gram.
Infus. chamom.....70.0 grams.
Tr. opii camph.....gtt. 1 to 11.
Syr. aurant. cort.....20.0 grams.
M. Sig.—Half a teaspoonful every one or two hours.

The opium may be replaced by tincture of rhatany or tincture of cascarilla. Excellent results can confidently be expected from the use of this formula.

Finally, regarding the ætiology of cholera infantum, Sonnenberger, Meinert and other recent investigators of the subject do not consider it a specific disease, rather a symptomatic complex which may be regarded as acute gastro-enteritis. Ætiologically, the disease may be the result of varied factors. In one case it may truly be due to the action of a specific germ; in another the result of poisoning by means of chemical compounds, or poison in food or milk, in the latter case the poison may be some vegetable alkaloid in the milk. This much mooted question is one open for discussion, but surely these recent contributions are of great value.

Book Reviews.

A TREATISE ON DISEASES OF THE NOSE AND ITS ACCESSORY CAVITIES. By Greville MacDonald, M. D. (London), Physician to the Hospital for Diseases of the Throat. Second edition. London and New York: MacMillan & Co., 1892. Price, $2.50.

The perusal of the first chapter, if no more, of this work will amply repay even the most preoccupied of the profession. The masterly manner in which the functions of the nose are discussed and the lucid descriptions of the methods of determining the conditions present, lead one to marvel that so many special books on the nose should have been issued.

The author presents his subject in an interesting and pleasing manner, and his deductions are logical and deliberate; his expressions are frank and without egotism; and his composition is so enticing that one finds himself in the midst of the work and in possession of accurate and carefully sifted information, without effort.

The views on vexed questions of function, pathology and ætiology are set forth with great fairness, and the conclusions are the natural outcome of the author's logical mind and scrupulous methods. The chapter on nasal reflexes is particularly frank and modern, and the suggestion that judgment be suspended "until future and more precise observations are forthcoming" cannot fail of approval. While placing great stress on the significance of the presence of abnormal conditions in the nose, it is only in their relations to nasal breathing, and not to hastily inferred reflex bronchial conditions, that he attributes the necessity for their removal.

In discussing surgical procedures the methods are clearly and concisely set forth. While illustrations of instruments are few, they are well chosen and fairly drawn. The absence of gaudy lithographic plates is quite refreshing. In typography, marginal notes, excellent paper, perfect proofreading and full index, the work is highly commendable.

A TREATISE ON BRIGHT'S DISEASE OF THE KIDNEYS: Its Pathology, Diagnosis and Treatment; with Chapters on the Anatomy of the Kidney, Albuminuria and the Urinary Secretion. By Henry B. Millard, M. A., M.D., Fellow of the Acad. of Med. of New York, and of the American Acad. of Med., etc, etc. Third edition. New York: William Wood & Co., 1892.

This well-written treatise upon the various forms of renal disease, which collectively are classified as Bright's disease, has reached its third edition, and we note several improvements both in revision and addition. The author has not changed his views regarding the supremacy of his own test for minute quantities of albumen, and, indeed, gives much confirmatory evidence of its extreme delicacy.

A striking feature in this edition is the

change which has occurred in the author's mind concerning physiological albuminuria. After summing up the available evidence and considering carefully the result of more extended clinical observation, he has made up his mind that physiological albuminuria does not exist, and that when albumin is present in the urine it depends upon a structural lesion. This portion of the book is of great interest, and the position taken by Millard, which to us is untenable, will no doubt be widely discussed by those interested in renal medicine. The chapter on the tests for albumin in the urine has been largely rewritten, and is now quite up to date.

The book is essentially a practical one, and the repeated editions prove beyond doubt that it fills a field of usefulness. It is attractively printed and bound, and presents the most modern views concerning the important subject of Bright's disease. The portion devoted to treatment is of great interest, and is admirably arranged. The drugs which have really been found of service have been given due prominence, while those that are of future promise have not been overlooked. As a readable and serviceable book we heartily recommend it to the profession.

Periscope.

THERAPEUTICS.

THILANINE, A LANOLINE DERIVATIVE.

Dr. Siebels (*La Semaine Medicale*, No. 57, 1891) has obtained by the action of sulphur upon lanoline a new lanoline derivative—thilanine—brown sulphurated lanoline. This substance, of which the chemical composition is still unknown, is a chemical compound and not a mechanical mixture. It contains three per cent. of sulphur. According to Dr. Saalfeld, who tried it in a large number of cutaneous diseases, it is a precious acquisition to dermato-therapy. It is entirely devoid of irritating action, and it cures such dermatoses as dry and humid eczemas, sycosis, acne rosacea, much more quickly than Hebra's salve, borated vaseline or lanoline. He regards it as specially a substitute for Hebra's salve. It has a sedative action upon pruritus.

NITRO-GLYCERINE FOR ASPHYXIA.

In a case of asphyxia from the inhalation of gas, Hoffman succeeded in relieving the symptoms by the subcutaneous administration of nitro-glycerine in doses of one hundredth of a grain. The injection was made in the precordial region, and was followed by marvelously prompt results.—*Journal American Medical Association*, December 26, 1891.

TREATMENT OF RINGWORM.

Dr. Goldsmith writes to the *British Medical Journal* that, when all other remedies had failed to effect a cure in three cases of ringworm of the scalp, in his own family, he tried Dr. Illingworth's method with prompt success. The formula for this strong blistering fluid, one application of which its originator claims will cure an ordinary case, is as follows:

℞ Hydrarg. biniodid.....ʒ ss.
Sal. sodii iodidi (1 in 4).....ʒ ss.

A small portion of this is to be diluted with three parts of water, at the time of application. It is to be painted on with a camel's hair pencil.

COFFEE AS AN ANTISEPTIC.

The experiments of Luderitz, of Vienna, tend to establish the belief in the antiseptic properties of coffee. A strong solution of coffee, for example, ended the career of a bacillus of typhoid in about twenty-four hours, the active streptococcus of erysipelas in twelve hours, while not longer than from three to four hours was sufficient to kill the malignant comma bacillus of cholera. Strong decoctions acted more quickly still; the effects, however, are stated to be due more to the products of the roasting of the coffee than to the active principle of the berry. In this connection it has been pointed out by a correspondent of the *Indian Medical Gazette* that it would be worth while to substitute coffee for tea among the cases of enteric fever in the European military hospitals in India. Coffee also might be given a trial in the treatment of typhoid fever in this country. As a beverage, doubtless, it would be appreciated by the patient, and in the light of Luderitz's researches, there is just the possibility that it might have some controlling influence over the disease.—*Medical Press.*

MEDICINE

TUBERCULOSIS OF THE TESTICLE.

Dr. Reboul, of Marseilles, treated three cases of this disease by injections of naphthol-camphor. He injected four to five drops every eight to ten days into the thickened tissues of the testicle and epididymis. Marked improvement was effected, the diseased parts becoming more indurated and contracted; and these results are more noteworthy since in two of the cases other measures continued for a long time had been unsuccessful.—*Allgem. Medicin. Central Ztg.*

A CAUSE IN THE PATHOLOGY OF THE ARREST OF GROWTH.

Fourriére (*Journ. de Mèd. de Paris*, 1892, January 4.) says: To the two recognized causes of arrest of growth, poverty, want and rachitis, should be added dyspepsia combined with dilatation of the stomach.

"The arrest of growth occurring among those suffering from dyspepsia with dilatation, probably from insufficient assimilation, constitutes a disease curable by means addressed to the treatment of the dilatation of the stomach, notably by massage of the stomach." M. Fourrière reports six cases.

DIPHTHERITIC DEGENERATION OF THE NERVES.

According to Moos (*Rev. Mens. des Mal. de l' Enf.*, September, 1891), there are two groups of changes which depend upon diphtheritic paralysis. In the first the changes affect the vascular system; in the second the nervous. The principal lesions of the vessels are thrombo-arteritis, phlebitis and hæmorrhage. The changes in the nerves are degenerative. Hæmorrhages have been observed in the intervertebral ganglia, the cord, the protuberance, the bulb, and even in the cerebrum. Most frequently there is parenchymatous neuritis of the peripheral nerves. In several cases the author has discovered micro-organisms, not only in the perineurium, but also in the nerve bundles. The paralysis may be attributed to specific organisms, or to secondary infections, caused by streptococci. The toxalbumins secreted by microbes may also be influential in the pathogenesis of the paralysis.

SURGERY.

A NEW METHOD OF SKIN-GRAFTING.

Dr. Prince A. Morrow, of New York, describes a new method of skin-grafting, the peculiarity of which consists (1) in the depth of the graft, which includes the entire thickness of the skin, and in some cases a layer of subcutaneous tissue; (2) in the method of precedure, which consists in removing a button of tissue (35 to 40 millimetres in circumference), of any required depth, by means of a round, cutting instrument, known as the Keyes cutaneous punch, and immediately inserting it in a receptacle or bed previously made by the same instrument.

In this way there is obtained perfect coaptation of graft with the base and margins of the surrounding tissues, thus insuring the most favorable conditions for immediate union of the parts. In fact, the absolute accuracy with which this may be done leaves nothing to be desired from a mechanical point of view.—*The International Journal of Surgery*, February, 1892, p. 41.

A CASE OF PRETERNATURAL ANUS; ENTERECTOMY, ENTERRORHAPHY, FOLLOWED BY IMMEDIATE RECOVERY.

Prof. Angelo Mazzucchelli (Pavia, Italy) records the case of a boy, æt 8. The preternatural anus presented itself after operation on a gangrenous loop of intestine belonging to an incarcerated inguinal hernia. The spur which separated the two intestinal ends was destroyed by means of an elastic ligature, which was left in situ for eight days. After the lapse of this period it was attempted to close the fistula, but the edges would not unite. The author, subsequently, performed in this case enterectomy and enterrorhaphy. About three centimeters were resected from each end of the intestines toward the convexity of the spur, in such a manner as to decrease towards the mesentery. Then the sutures after Czerny's method were applied. The intestines were then replaced into the abdominal cavity, the parietal peritoneum, as well as the abdomino-scrotal wound closed. The wound healed by first intention and the patient recovered quickly.—Meeting of Medico-Chirurgical Society, Pavia; *Gazzetta degli Ospitali*, No. 89, p. 708, 1890.

OBSTETRICS.

CÆSAREAN SECTION FOR ECLAMPSIA.

Swiecicki (Przeglad Lekarski, abstracted in *Repertoire Universel d' Obstetrique*, 1891) reports a case as follows: A 7-para, who for five hours had eclamptic seizures and had been comatose. There was œdema of the lungs with a scarcely countable pulse. The os was not at all dilated. Cæsarean section was done without special difficulty, the operation lasting thirty minutes. The child was asphyxiated and could not be revived. The woman's pulse, during and after the operation, improved a little, but the coma deepened, and the woman died of œdema of the lungs. The course of this case disproves Halbertsma's assertion that the operation always has a favorable influence upon the eclampsia. Here the effect was practically *nil*. In another case, quoted by Swiecicki, there were maniacal attacks after the operation. —*Univ. Med. Mag.*

LEUCEMIA AND PREGNANCY.

Laubenburg says that (*Archiv für Gynakologie*, Band xl., Heft 3, 1891).—Leucemia in women is an exceedingly rare affection, much rarer than in men (according to Birch-Hirschfeld, 32.5 per cent to 67.5 per cent). Laubenburg was able to find only three cases reported in literature. He has a case under observation, the history of which is briefly as follows: Patient 32 years old, pregnant, came to the hospital with marked symptoms of anemia; these she had had for three years and they had been the direct cause of three miscarriages. She had been married twelve years; six children four abortions. Her previous history was negative. Present illness began about seven years ago; no assignable cause. She complained of weakness, loss of appetite, indigestion, palpatation, dizziness, etc. The weakness frequently compelled her to remain in bed for from four to six weeks at a time. Of late she menstruated very irregularly, only a small quantity, and this very pale. She never had any hæmorrhages. During the past year she had a yellowish hue, lasting for a short time. For three or four years she had observed a tumor growing on the left side. An examination on admission to the hospital revealed great pallor and somewhat icteric hue, general anasarca. Uterus (fundus) three fingers below the umbilicus. The left hypochondrium filled by an enlarged spleen. The liver extended four centimetres below the free border of the ribs. Lungs normal. Heart not enlarged; systolic murmur at the apex. Pulse small and rapid (100). The jugulars showed a venous pulsation. A diagnosis of pregnancy (fifth month) was made. Examination of urine showed considerable albumin and a few granular casts. Examination of blood: Increased number of white blood corpuscles (w : r : : 1 : 10). Miscarriage on December 19th; breech presentation; amount of blood lost slight; child macerated and corresponding in size to about the twentieth week; duration of labor, twelve and a quarter hours. Three hours after labor patient's condition became very bad, and she gradually grew comatose. A difficulty in hearing was especially marked. At the expiration of forty hours, in spite of stimulation, she died of pulmonary œdema. Just before death a peculiar cadaverous odor developed (this has been noticed and described by Eichhorst, Steinberg, and Schultze). Fifteen hours after delivery the urine contained albumin and a few granular casts; in the blood the ratio of white to the red corpuscles was one to fifteen. Thirty hours after delivery there was scarcely a trace of albumin and no casts in urine; the ratio of white and red corpuscles was 1 :20. No micro-organisms found in the blood. Autopsy: Substance of brain exceedingly pale. In abdomen moderate quantity of yellowish, transparent fluid. Mesenteric glands not swollen. Spleen markedly enlarged and adherent to the diaphragm. On its posterior surface a white cicatrix can be seen; this is partially calcified (rupture of spleen?). Microscopically, hyperplasia of the spleen pulp, slight increase and extension of the trabecula. Liver enlarged, yellowish-brown. Microscopically, increase of interstitial connective tissue and cellular infiltration; many liver cells atrophied; fatty degeneration. Capsule of kidneys adherent in places. Kidneys on section are pale; the right has red and yellow spots upon it. Microscopically, principal change is in the cortex; the cells of the glomeruli and canaliculi show a cloudy swelling, and in their vicinity, are lymphoid infiltrations. Left ovary atrophied; the right enlarged, containing a small cyst; alongside of this a corpus luteum verum.

Microscopically, the follicular ovarian tissue is very feebly developed; otherwise nothing pathological. Uterus well contracted; mucous membrane extremely pale. From a study of this and the other reported cases Laubenburg concludes:

1. That leucemia may at times stand in direct relation with the disturbances caused by pregnancy, labor, or the puerperium; 2, that it may be the direct cause of an abortion; 3, that it becomes more severe during pregnancy; 4, the prognosis becomes decidedly worse, even very grave, at times during pregnancy or labor; 5, the induction of premature labor is to be recommended, and that in the early months of pregnancy.

GYNECOLOGY.

WHAT CASES SHOULD BE DRAINED AFTER ABDOMINAL SECTION?

Dr. Rufus B. Hall, of Cincinnati, has drained in every case of abdominal section which he has made since 1886. The objections to the drainage-tube that have been given at various times are that it is a source of septic infection, a frequent cause of hernia, a foreign body, a cause of irritation, and not infrequently omentum becomes fastened in the perforation, preventing its easy removal. As to the first objection, the author has seen no case of sepsis developed from the use of the drainage-tube; but it is evident that, unless the utmost care is taken, such an accident might occur. The tube should be pumped out every hour or two until it is removed. In his own cases he has seen two hernias developed in the line of cicatrix, but in neither of them did the hernia occur at the point where the drainage-tube was placed. He has seen no appreciable disturbance from irritatian of the tube since he commenced using the small, perfectly smooth tube with no side perforations. The small, perforated tube of Dr. Price fulfils the requirements for abdominal drainage perfectly. If the dressing is so arranged as not to make pressure upon the outer end of the tube, no apprehension need be entertained as to it causing trouble from irritation, provided it be removed just as soon as the fluid becomes straw-colored. If one employs the old style tube, with large side perforations, there is danger of omentum becoming forced through the openings, causing difficulty in removing the tube and possibly favoring the development of hernia; but in the use of the small tube with the narrow perforations, these dangers are reduced to a minimum.—*Medic. Record.*

PEDIATRICS.

ORBITAL HÆMORRHAGE IN YOUNG CHILDREN.

Spicer (*Brit. Med. Journ.* 1891, ii., 1313.) writes—These hæmorrhages occurred beneath the periosteum, in the course of infantile scurvy, a disease generally known as scurvy rickets. The subjects were hand-reared infants, generally between six and eighteen months of age, who has been brought up mostly on "infant foods." After a period of ill-health, spontaneous hæmorrhage came on beneath the periosteum in various parts of the body, sometimes, but not always, during the course of an attack of rickets. In the orbit the hæmorrhage in two forms, either as a line of blood-staining at the orbital margin, or as a large effusion producing displacement of the eye and distension of the upper lid; the form which the hæmorrhage assumed was due to the anatomical disposition of parts in the orbit. The hæmorrhage subsided rapidly at first, but did not disappear entirely; the eye was left prominent for many months. The treatment was essentially that of scurvy; in addition to the ordinary food, juice of fresh meat, a little fruit or vegetable, cod-liver oil, or cream should be given. The slighter cases recovered rapidly; the more serious ones were slow in progress and often fatal.

HYGIENE.

DENTISTS: A NECESSITY, NOT A LUXURY.

Dentistry is undoubtedly the most useful and the most reputed of the departments of specialised surgery. The idea that the care of the teeth might safely be confided to the extractive mercies of the family medical attendant has long since been exploded, and of late years people of the middle classes of society have more and more availed themselves of the services of the skilled dentist. As a nation we are still far behind our Transatlantic cousins in the amount of attention and care bestowed on the beautification and conservation

of the teeth, but year by year the prophylactic value of the dentist's skill is becoming more widely appreciated. At the last meeting of the Board of Management it was decided to appoint a paid dentist to attend to the teeth of the children in the Hanwell Parochial Schools, and few persons will be disposed to find fault with an innovation so conducive to comfort and health. There still survives an impression that a dentist is a luxury, but it is not so long since that the importance of attending to the eyesight of school children has come to be generally recognized. The dentist will probably do more to procure relief from suffering and to promote health than even the optician, and we cannot but applaud the new departure.—*Med. Press.*

PROGRESS OF CREMATION.

Cremation appears to be making steady progress. The Sanitary Council of Vienna has passed resolutions to the effect that the burning of the bodies of the dead is the safest mode of preventing the evils of earth burial. It has been decided by the Bombay Municipal Corporation to grant the request of an Englishman to be allowed to erect a crematorium for Europeans in the municipal burying ground. The Corporation has granted a plot of ground measuring 40 feet square for that purpose, at a nominal rent of one rupee per annum. The condition attached is to the effect that the crematorium shall be removed at one month's notice if the Corporation so requires.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

CALCIUM SALICYLATE.

This salt is now being used alone or with bismuth salicylate as a remedy for diarrhœa and gastro-enteritis. The following formula for its preparation is suggested by Herr Vonjescu in *Zeit. Ost. Apot. Ver.*, page 630: Dissolve 200 grams sodium salicylate in 5000 grams distilled water, filter, add 10 grams solution soda sp. gr. 1.160. Make a separate solution of 100 grams of calcium carbonate by means of dilute acetic acid to neutrality, filter and add slowly to the former solution. Wash the precipitate on a filter to free it from sodium acetate and dry at 35° C. (95° F.) and keep in well-closed bottle. It is a white, odorless and tasteless crystalline powder soluble in cold water 1 in 2000, readily soluble by means of carbonated water or by dilute acids. Dose, 0.5–1.5 grams.

NEW REAGENTS FOR COPPER SALTS.

Le Moniteur de la Pharmacie (1891, 1006) states that pyrogallic acid and a cold solution of neutral sulphate of sodium yield with small quantities of copper salts a blood red color. I cc. of a solution of copper sulphate, $\frac{1}{3000000}$, still shows the reaction.

Mr. Deniges evaporates the solution to be analyzed, to dryness, and adds to the calcined residue one drop of a 5 per cent. solution of bromide of potassium. The mixture is again evaporated to dryness when, if copper be present, a characteristic violet zone of anhydrous copper bromide appears.

NEWS AND MISCELLANY.

School Trustee.—"Your class in physiology does not appear to be up to the standard, Miss Birch.

Teacher.—"I've done the best I could with the charts that I found here, Mr. Small."

School Trustee.—"Um–er–what did the charts consist of?

Teacher.—"Six views of a whiskey stomach."

—*Puck.*

EFFECT OF DYNAMITE ON FISH.

M. Regnard recently read notes on this subject before the Société de Biologie de Paris. A cartridge containing thirty grammes of dynamite was exploded in a pond full of fish. The fish which were closest to the cartridge were annihilated, those farther off lay motionless on the surface. They were not, however, dead, for even when touched very gently they recovered their usual agility and disappeared. This fact is known to poachers, who catch the fish stunned in this manner in a landing net, taking care not to touch it until it is fairly in the net. M. Regnard suggests that the vibrations set up by the violent explosions are transmitted to the nerve centres, and produce effects similar to those seen in man in cases of mine explosions and railway accidents.—*Brit. Med. Jour.*

STUDY OF EXALGINE AFTER OBSERVATIONS MADE AT THE LARIBOISIÈRE HOSPITAL.

BY DR. ÉMILE DÉSIRÉ.

(*Concluded from last number.*)

Hutchinson's Face.

CASE 20.—R., a woman of 34. **Violent syphilitic cephalalgias** which prevented sleep and did not give way to specific treatment. May 9: four grains of exalgine twice. May 10: the same dose gave the patient a fairly good night. May 11: same dose; no more pain; appetite better. Took the drug until the 13th, when she left considering herself cured of the pain.

CASE 21.—B., woman of 22 years. Chloro-anæmia; neuro-pathic; has suffered with **cephalalgia** for three months. The pain comes on after dinner and continues until the next morning at 11 o'clock; it is accompanied with nausea, and has remained in spite of a great variety of treatment. May 11; 4 grains of exalgine at 2 and 5 o'clock P. M. Slept that evening without pain. The pain reappeared the next day but was again cured by the same doses. May 13: no more pain and the drug was suppressed. Eight days after there was no return of the complaints.

CASE 22.—T., man of 58; an **old facial neuralgia** with contracture. Took 4 grains of exalgine on the 27th, the 28th and 29th of May, at the end of which time the pain was less and the patient was able to sleep at night. May 30: 7 grains of the drug caused still greater improvement. This dose was continued for five days with result of a perfect cure.

CASE 23.—T., a girl of 19. Accident to wisdom tooth. Suffered much from **facial neuralgia** on the same side. June 1 to 5: 4 grains of exalgine twice daily; the pain disappeared and the patient left.

CASE 24.—I., aged 28: chloro-anæmic; **cephalalgia.** Four grains of exalgine from June 1 to 6; not much improvement until June 5. June 7: the cure is complete.

CASE 25.—L., woman of 37. **Bone-pains** in a syphilitic subjected to specific treatment. For five days took four grains of exalgine without much effect. On June 1 the dose was increased to 7 grains, and a relatively good night passed. June 2, same dose: pain only at times. June 3: 4 grains: scarcely any pain. This last dose was continued for five days, and the patient complained no more of suffering.

CASE 26.—M., woman of 40 years. **Occipito-facial neuralgia** for 14 days, unable to leave her bed. May 23 to 26: 4 grains of exalgine; May 27 to June 1: 7 grains; June 2 to June 4: 12 grains of exalgine, with no improvement. June 5, 15 grains produced sensible improvement. This last dose was continued to June 8, when the pains returned and the drug was stopped.

CASE 27.—G., woman of 23; **dysphagia** with aryteno-epiglottis in a tuberculous patient. June 1: 4 grains of exalgine, which was continued for some days. Amelioration was manifested on the first day and the improvement continued until she left the hospital.

CASE 28.—J., 27; **intercostal neuralgia.** Four grains of exalgine from the 1st to the 8th of June with gradual amelioration and cure of the pain.

CASE 29.—A., woman of 29. **Dysphagia** with aryteno-epig)ottitis in a tuberculous patient. Four grains of exalgine from May 27 to June 3. Improvement began on the first day and deglutition was painless on the last.

CASE 30.—R., woman of 24. **Inter-costal neuralgia:** pains in the head almost continuous. Four grains of exalgine for eight days, when the patient considered herself well and left.

CASE 31.—F., woman of 30. Similar to Case 30, except that the dose was increased to 7 grains on the third day.

CASE 32.—L., woman of 49. **Old intercostal neuralgia,** which had rebelled against all kinds of treatment. Four grains of exalgine were given for a few days, with little amelioration; there was some vertigo, but it did not interfere with treatment. On June 3, the dose was increased to 7 grains, with very sensible improvement. June 5, the vertigo had disappeared and the pain was almost nothing. June 8, the patient left, cured, having taken 7 grains of the exalgine without inconvenience.

TABLE OF THE CASES TREATED BY EXALGINE.

	NO. OF CASES TREATED.	SUCCESSFUL OR AMELIORATED	UNSUCCESSFUL.
Facial Neuralgia	3	2	1
Intercostal Neuralgia	4	3	1
Migraine	5	5	—
Hysteralgia	2	2	—
Bone-pains of syphilis	4	4	—
Dysphagia	8	8	—
Subacute Rheumatism	2	2	—
Subacute Sciatica	2	2	—
Laryngeal Epithelioma	1	1	—
Dental Neuralgia	1	1	—
	32	30	2

Conclusions—We have employed exalgine entirely as an analgesic and not as an antipyretic; we have not given it where fever was present.

The great diversity of affections in which we have employed exalgine with success authorize us to conclude that, without prejudice to general treatment, it is an admirable specific against pain.—*Society for Scientific Studies*, Paris.

THE END.

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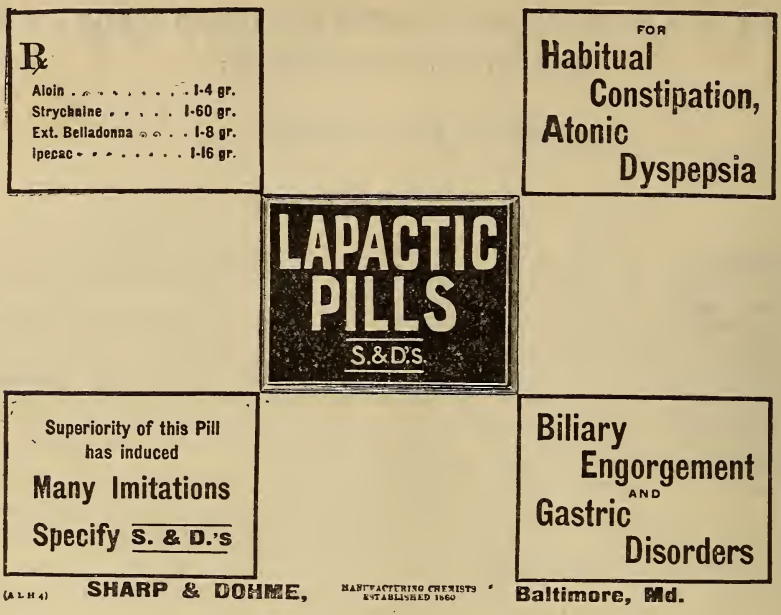

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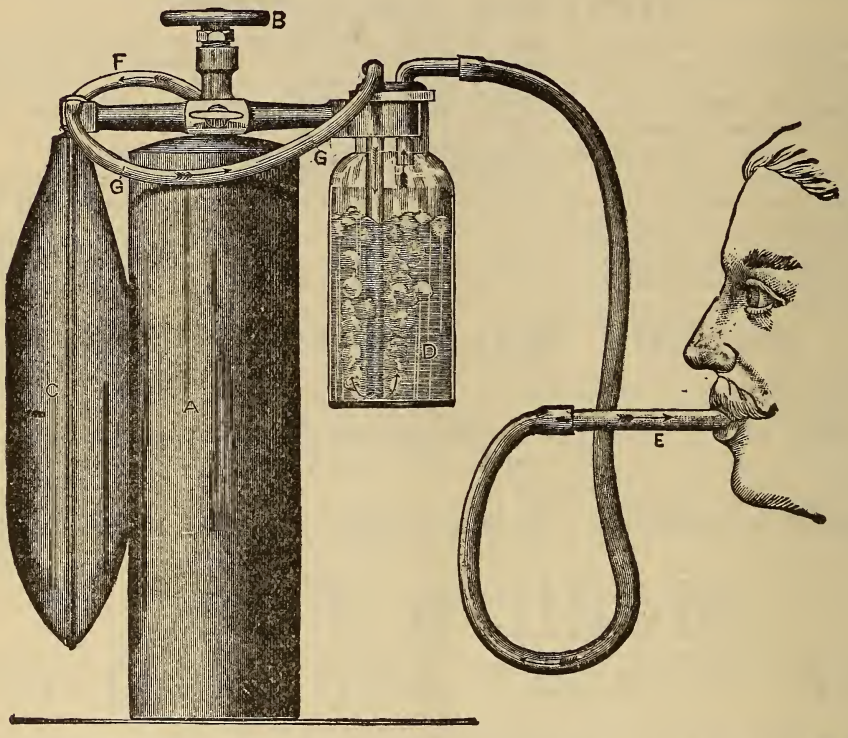

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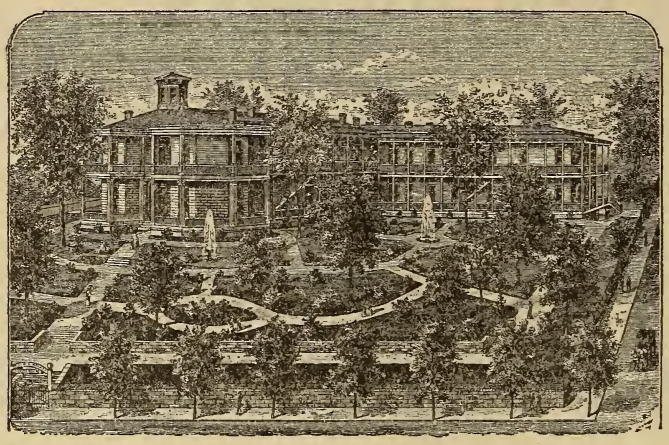

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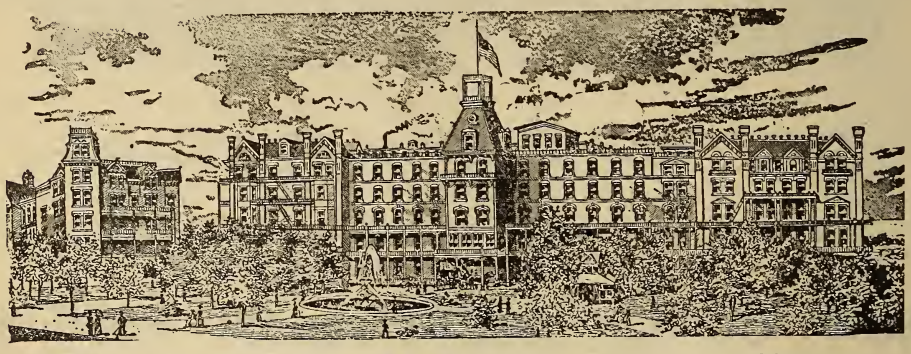

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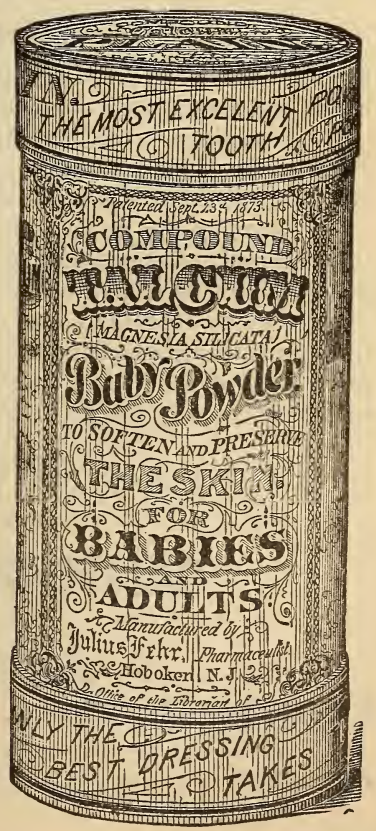

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Among antipyretics this compound is destined to take a foremost place by virtue of its free solubility, which enables it to be very conveniently given and also ensures its prompt and ready absorption. According to VON MERING 8 grains reduced the febrile temperature as much as 12 to 16 grains of antipyrin. HERTEL gave Phenocoll hydrochloride in powder form (in wafer), 1¼ drachms being divided over the 24 hours. In severe articular rheumatism with some fever the remedy has exerted a beneficial action upon the swollen joints, when all other remedies have failed. (*Therapist.*)

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The most characteristic property of this compound is its power of dissolving uric acid and forming a comparatively freely soluble urate. It takes up in the cold twelve times as much uric acid as carbonate of lithium under the same conditions, and the salt formed (always the neutral urate, even in the presence of an excess of acid) is taken up by one-seventh of the volume of water required to dissolve the same quantity of lithium urate. The experience of a number of authors is sufficiently encouraging to make further trials seem very desirable. DR. UMPFENBACH believes the compound may prove a valuable diuretic, while some observers record tonic and stimulant effects. The dose is 15 grains per day, divided in acceptable doses, or dissolved in a quart of mineral water which patient may drink *ad libitum*.

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This preparation produces results, which can not be obtained from the use of commercial Bromide substitutes.

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STUDY OF EXALGINE AFTER OBSERVATIONS MADE AT THE LARIBOISIÈRE HOSPITAL.

BY DR. ÉMILE DÉSIRÉ.

A. Mesmer.

THE following observations on the analgesic effects of exalgine were made at the Lariboisière Hospital in the service of Dr. Gouguenheim. The remarkable analgesic effects of this drug were first pointed out by MM. Dujardin-Beaumetz and Bardet in a note to the Academy of Sciences, March, 1889. M. Bardet has since, in many other publications, mentioned the elective action of exalgine upon the element of pain. Among others who have had a favorable experience with the drug may be mentioned Gaudireau, Desnos, Peterson, Gorodichze, Thomas Frazer, Herschel, Farrar, Rabow and Heintz of Berlin, Moncorvo and Ferreira.

In our cases the patients were carefully observed from day to day, and we may begin by saying that all our observations have been in favor of the medicament. The dose was rarely over four grains, given twice daily in solution.

Although used in very diverse affections there were but two failures: one of these was a woman with occipito facial neuralgia, the origin of which it was difficult to trace. The dose was increased in this case and relief was obtained for a time, but the pain recurred. It might have been permanently cured by higher doses, but we concluded not to push the drug. The other case was one of intercostal pain against which the ordinary remedies had been used in vain.

In our experience, if the ordinary dose of four grains does not clearly act favorably, it is useless to increase the amount.

In facial, intercostal, uterine, etc., neuralgias which we have treated with exalgine, amelioration has been almost immediate, and the complete cure has been obtained at the end of about one or two days. Patients who have suffered for weeks and months were completely relieved at the end of some days of treatment. Search should of course be made for the cause of the malady.

The bone-pains of syphilis and the violent headaches, which anti-syphilitic treatment had not relieved, yielded in a short time to 4 grains of exalgine. These patients, who had no rest either night or day and were absolutely prostrated, have been relieved by the first dose, and completely cured of their intense pains after some days.

We have also employed the exalgine to combat the pain and dysphagia in those suffering from tuberculosis, which presents a swelling and redness of the aryteno-epiglottic region. The experiments were rendered more easy as M. Gouguenheim's clinic includes a great number of laryngological cases. Exalgine was prescribed for a great number, **some hundreds**, of the out-patients with good results. We do not pretend that it acted upon the lesion, but it certainly relieved the pain. Muriate of cocaine and menthol have only a transitory effect in these cases.

We have rarely obtained the complete disappearance of these pains by exalgine alone, but, supplemented with other treatment the results have given great relief to the patient.

CASE 1.—M., aged 53, May 1, woman. **Bone-pains of syphilis** and **intense cephalalgia.** Energetic anti-syphilitic treatment and every means tried for the headache, but the patient could not sleep. May 25: four grains of exalgine at 2 and 5 o'clock in the afternoon; no amelioration. May 26: same doses, but does not sleep very well. May 27, 28: same doses; much better, but the pain continues. May 29: dose raised to 7½ grains; marked amelioration; patient sleeps well without pain in the head. May 30: four grains. The condition is maintained and is excellent. May 31: discharged completely cured of the cephalalgia.

CASE 2.—A., girl of 22 years; **dysphagia**; complains of much pain at the level of the larynx at the moment of deglutition. May 22: 8 grains of exalgine in two doses; not much change. May 23: 4 grains; less pain in swallowing. May 24: much less pain; 4 grains of exalgine. May 25: 4 grains more of the drug. The patient feels scarcely any pain in swallowing although the laryngoscope shows no diminution in the swelling. She left the hospital.

CASE 3.—L., 33 years; **subacute sciatica** in the left leg. May 22: 4 grains of exalgine; no sensible amelioration. May 23, 24, and 25: 4 grains daily without much improvement. May 26: 4 grains. Much less pain; patient walks better. May 29: 8 grains continued on the 30th and 31st. Pain only at distant intervals. June 1, 2, 3, 4 and 5: 4 grains of exalgine daily. No pain at all and left the hospital.

CASE 4.—C., 30 years, **dysphagia**, very pronounced, depending on an aryteno-epiglottic tuberculosis. Has fits of coughing when he drinks, and prickling sensations at the level of the larynx. May 15, 16, 17: 4 grains of exalgine twice a day. Less pain on deglutition; but the patient complained of some vertigo, nausea, and visual trouble after the third dose. The exalgine was continued, however, for eight days when he left the hospital suffering much less pain in the region of the larynx.

CASE 5.—G., woman of 28 years. Albuminuria with uræmic crises; **acute purulent otitis** on the left side; tonsilitis; facial neuralgia. May 11: 4 grains of exalgine were given twice in the afternoon with rapid amelioration of the neuralgia. By evening all pain had nearly disappeared and the patient was able to sleep for the first time in many days. May 12: 4 grains more were given; the neuralgic pain had not returned several days after.

(*To be continued in our next.*)

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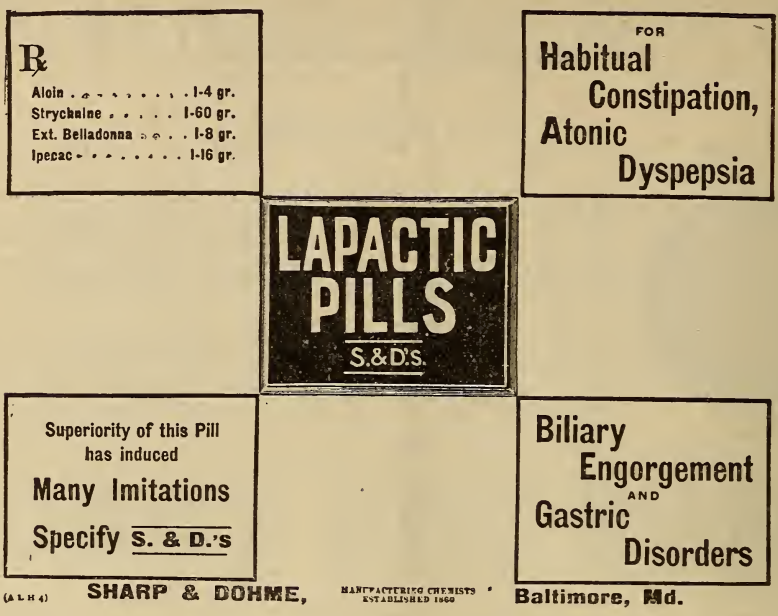
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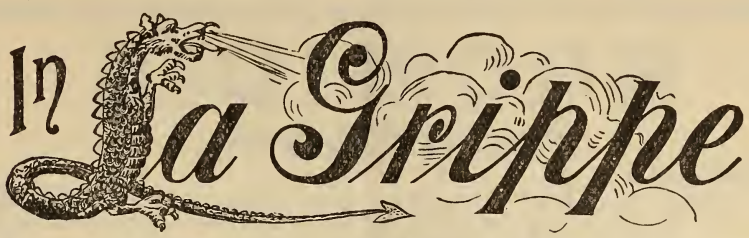

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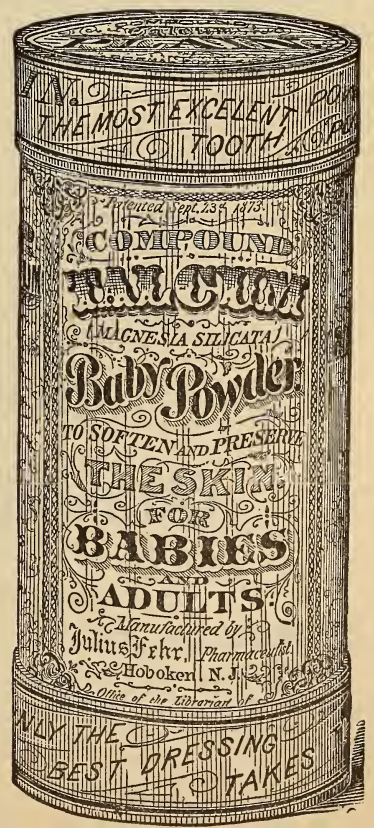

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Any of the accidents of exposure that ordinarily induce pulmonary congestion or inflammation may light up the slumbering fires and precipitate a rapidly destructive tubercular consumption of the lungs. Or these imperfectly calcified foci may become the source of infection of the system with general acute miliary tuberculosis.

What is the great lesson in practical therapeutics to be learned from this important pathological discovery? It is that those who have ever shown signs of incipient phthisis should be thereafter kept under skilful professional observation. Appropriate treatment should be continued until all physical signs of active disease completely disappear. They should live guarded lives thereafter, conforming to correct hygienic rules. But above all, whenever any symptoms of pulmonary disturbance appear, they should be at once put upon active treatment and continued until such symptoms have entirely passed away.

Now, what is the appropriate treatment? Let us listen to the learned A. Lutaud, of Paris, who says, "The fundamental basis of all rational therapeutics must be to restore the tone and reinforce the power of resistance of the tissues. The organism must be placed in a condition, not only to provide for daily needs and to resist vicissitudes of temperature, humidity, etc., but to enable it to resist the attack of enemies in the form of the pathogenetic microbes. It is, above all, necessary to prevent that devitalization of the tissues which renders them an easy prey to the marauding bacillus. Hence the efforts of therapeutics of all nationalities have been directed to the discovery and perfection of tonic and reconstituent preparations."

It is now a well established fact in pathological science that the serum of pure, healthy blood is a sure and rapid destroyer of the germs of this disease. Hence the appropriate remedy is that which will most rapidly enrich the blood—the hypophosphites of lime and soda.

But this remedy will also promote the more rapid calcification of the diseased areas in the pulmonary tissues. Hence, it is entitled in a double sense to the claim of a SPECIFIC in this disease, first given it by the illustrious Churchill.

The patient should be given McArthur's Syrup (a syrup of the chemically pure hypophosphites of lime and soda) from the time the disease is first suspected, with appropriate intervals of intermission, until he is perfectly restored, and this treatment should be resorted to during any marked departure from health thereafter.

The McArthur Hypophosphite Co., Boston, Mass., will furnish you valuable evidence of the curability of consumption and a sample bottle of the syrup without expense, except express charges, if you wish to make a trial of it in your practice.

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"The Standard Preparation of Erythoxylon Cocoa."

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- "Special reference to the nervous system, in all morbid states, melancholia, etc.
- "Tonic in laryngeal and gastric complications, stomach troubles.
- "All cases where a general toning or strengthening of the system is needed.
- "The only tonic stimulant without any unpleasant reaction, and may be given indefinitely, never causing constipation."

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Humanized Crusts, - -	2.00, large.

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Dose: 30 to 45 grains; effect within 30 minutes.

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A good formula for prescribing is

Chloralamid-Schering,.....4 drachms.
Spts. Frumenti,.....3 ounces.
Elix. Aurantii, sufficient to make 4 ounces

Mix. Take one tablespoonful (30 grains Choralamid) in water.

CHLORALAMID—Schering has received merited praise and endorsement from highest medical authorities all over the world.

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Notes on New Remedies.

Chloralamid in Epilepsy.

At the October meeting of the N. Y. Academy of Medicine, Dr. C. L. Dana, in speaking of the symptomatic treatment of epilepsy, refers to choralamid as follows: "The most valuable adjuvant was hydrate of chloral, but I have found a new drug in chloralamid which does all the good ascribed to the former drug, without affecting the heart or circulation."

Piperazine and Urinary Calculi.

Interesting experiments have been made recently by Dr. FINZELBERG, Director of Schering's Research Laboratory, on the action of piperzine upon artificial urinary calculi consisting of pure uric acid, or that compound with calcium phosphate, or of ammonium urate, etc. The design was to ascertain whether piperazine had any solvent effect upon these. The result of the experiment showed that all the forms of concretions alluded to dissolved freely and perfectly within a comparatively short time in a one per cent. piperazine solution. In a few cases nothing remained but a light honeycombed skeleton, which consisted of the hardened cementing mucus. It was particularly noticed that the edges of the calculi, sometimes very sharp, dissolved away rapidly in the piperazine solution.—*Chemist and Druggist.*

Phenocoll Against Epidemic Influenza.

The study of the relationship between chemical constitution and physiological action is of comparatively recent date, but it has already led to results sufficiently interesting to make it evident that along this line promising work still remains to be done.

Dr. HANS ARONSON has recently made an investigation into the therapeutical effect of certain acid derivatives of acetanilid and phenacetin. He confirmed EHRLICH'S theory that the introduction of a sulphone group into the molecule of certain compounds which act upon the central nervous system, renders them inert as regard antipyretics, and he found that a very large number of acid derivatives of the bases mentioned are equally destitute of antifebrile effect.

He concludes with the observation (*Deutsche med. Wochenschrift*): The problem of obtaining soluble antipyretics from acetanilid, or rather phenacetin, has been recently solved in another way—namely, by the introduction into the molecule, not of acid, but of basic groups. To this category belongs *Phenocoll*, recently introduced into commerce and recommended on all hands as an antipyretic and anti-rheumatic. The compound is an amidated phenacetin, and is related to the body exactly in the same way as glycocoll to acetic acid. As an antineuralgic it exerted, in a few cases observed by me, a prompt and reliable effect.

It is also worthy of note that *Phenocoll* is being successfully given *against epidemic iufluenza*, which has reappeared here and there recently. This affection is so likely to be followed by severe sequelæ, that it is important to avoid lowering the vitality of the system in every possible way. In this respect Phenocoll is specially indicated, as it has been proved to have no deleterious effect upon the blood, such as most of the antipyretics in use undoubtedly have. According to all the authorities who have hitherto recorded their experiences with Phenocoll, it is free from all unpleasant or dangerous after-effects.

In 8 to 15 grain doses, repeated at intervals of about an hour, its beneficial effect is promptly manifested. The rheumatism-like pains disappear, and the temperature falls to the normal. At the same time the patients experience a feeling of general well-being.

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This preparation produces results, which can not be obtained from the use of commercial Bromide substitutes.

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An INVALUABLE REMEDY in the treatment of Phthisis—it arrests the decay of lung tissue, diminishes the fever, lessens the cough, abates the soreness in the lungs, improves the appetite, and impedes the progressive emaciation.

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PEACOCK CHEMICAL CO., ST. LOUIS.

STUDY OF EXALGINE AFTER OBSERVATIONS MADE AT THE LARIBOISIÈRE HOSPITAL.

BY DR. ÉMILE DÉSIRÉ.

(*Continued from last number.*)

Patient at the Salpetriere.

CASE 6.—J., **Dysphagia,** with arytenoid tuberculosis. Severe pain at the level of larynx increased on deglutition. May 28 and 29: 4 grains exalgine twice each day; less pain June 1 and 2: 7 grains of the drug with diminution of the dysphagia. June 3 and 4: 4 grains; very little pain. June 7: not having taken any more exalgine the pain returned. June 10: has taken exalgine three days. Left the hospital with but little pain.

CASE 7.—C., woman of 58: **neuralgic pains** in the region of the stomach, especially for the last two days. May 29: 4 grains of exalgine daily until June 1st. No more pain.

CASE 8.—D., woman of 26. **Intercostal neuralgia** in a tuberculous patient, but without pleural lesion. Severe pain for the last 15 days, especially if she attempts to move a little quickly. May 22: 4 grains of exalgine; diminution of pain. Some nausea, insignificant vertigo, no troubles of vision, or cyanosis. May 23, 24: 4 grains; considerable amelioration. May 27; the pain having recurred 7½ grains of exalgine were given; no amelioration. May 28, 29: 7½ grains twice each day without very sensible improvement. May 30: patient desired the medication to cease.

CASE 9.—S., man of 54; **subacute articular rheumatism** in nearly all the joints, but especially in the shoulder. No fever. May 25: 4 grains of exalgine. Pronounced amelioration by evening. May 26: 4 grains; nearly complete disappearance of the pain. Left the hospital.

CASE 10.—B., man of 21. Tuberculosis with hæmoptysis. Interarytenoid vegetations. Aryteno-epiglottic œdema determining an **intense dysphagia,** especially for liquids. May 22, 23, 24 and 25: 4 grains of exalgine twice daily without sensible amelioration. May 25: dose 7 grains twice daily. June 1: appreciable relief. He was now given four grains twice a day until June 4, when he left with nearly complete cure of the dysphagia.

CASE 11.—J., 19 years old. **Rheumatism** treated at first with salicylate of soda without much result. May 22 to 26: 4 grains of exalgine daily in two doses; amelioration the first day and cure the last day.

CASE 12.—B., man of 49 years. Out-patient. **Laryngeal epithelioma;** intense pain. May 14: 4 grains of exalgine; vertigo and visual troubles, doubtless due to his very feeble condition. May 15: 4 grains of exalgine gave marked relief to the pain. The patient now ceased to attend, being too weak to leave his bed.

CASE 13.—G., aged 37. Laryngo-pulmonary tuberculosis. **Dysphagia** with aryteno-epiglottic œdema. An operation gave but little relief. May 9, 10, 11; 4 grains of exalgine; some relief to the dysphagia. May 12 the dose was increased to 7 grains with very pronounced relief; less pain on deglutition. Left the hospital.

CASE 14.—J., woman of 49. **Cephalalgia in a cardiac.** Since January has suffered from violent headaches with nausea. May 25: 4 grains of exalgine with a little amelioration in the night. May 26: complete disappearance of the pain. No more of the drug was given, but the cure was maintained.

CASE 15.—S., woman of 28; **uterine neuralgia.** May 25: 4 grains of exalgine was given with diminution of the pain, which entirely ceased after a second 4 grains given on the 26th.

CASE 16.—G. Undoubted symptoms of secondary syphilis. Complains of **violent headache,** which absolutely prevents sleep. Anti-syphilitic treatment of three weeks had no effect on the cephalalgia. May 11: 4 grains of exalgine were given twice in the afternoon. The patient slept the same night, which was the first good night he had passed for three months. May 12, no exalgine was given and the pain reappeared. May 14: 7 grains of the drug given twice. The patient slept as if he taken a powerful narcotic. The headache had nearly completely disappeared. Left the hospital.

CASE 17.—A., 24 years; neuropathic; menses frequent and abundant; vertigo; vomiting; **neuralgia** in nearly all the head. **Pains in the heart** and epigastric region. May 22: 4 grains of exalgine given twice in the afternoon caused nearly all the pain to disappear that evening. May 23: same doses; some vertigo and visual trouble, but not enough to prevent the patient from considering herself much better. Map 25: has continued to take the exalgine in the same doses; left the hospital completely cured.

CASE 18.—Chloro-anæmia. **Neuralgia** in all the head, continuous and exaggerated when the patient moves. May 22, after a second dose of 4 grains of exalgine there was much improvement. May 23, the same dose caused the entire suppression of pain which has not since reappeared.

CASE 19.—H., 31 years old. **Sciatic neuralgia** in an alcoholic the subject of old syphilis. Much amelioration after a second dose of four grains of exalgine. May 28, 29: same doses. May 30: 15 grains in two doses; is able to walk up and down the ward. Continued the drug in doses of 4 grains twice daily and left the hospital two days after.

(*To be concluded in our next.*)

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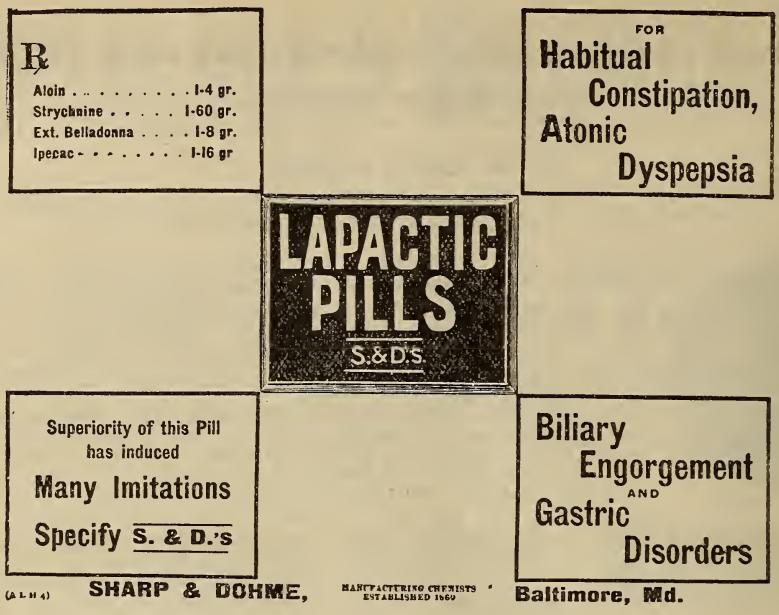
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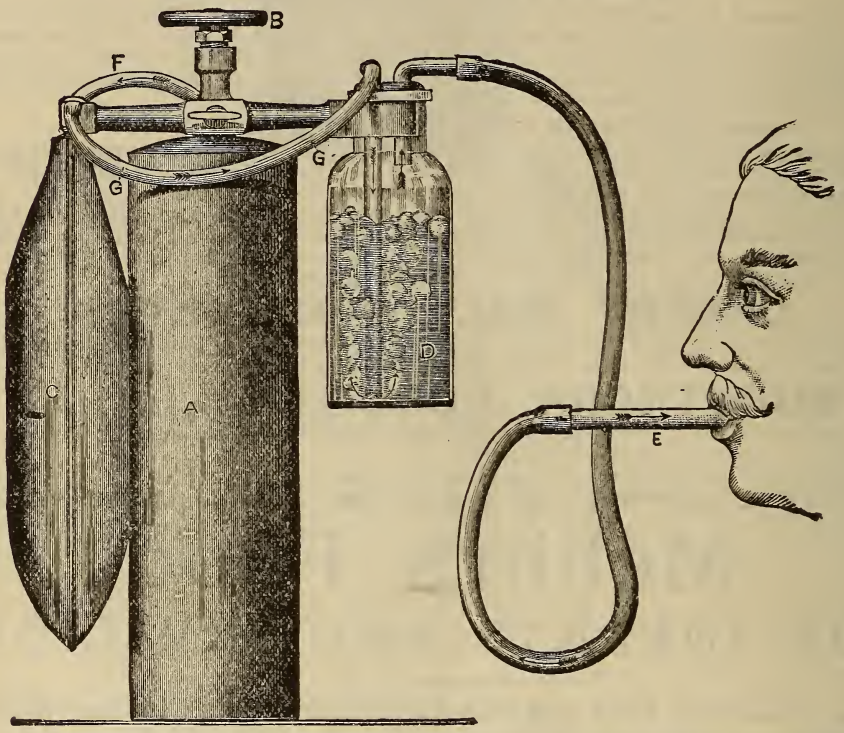

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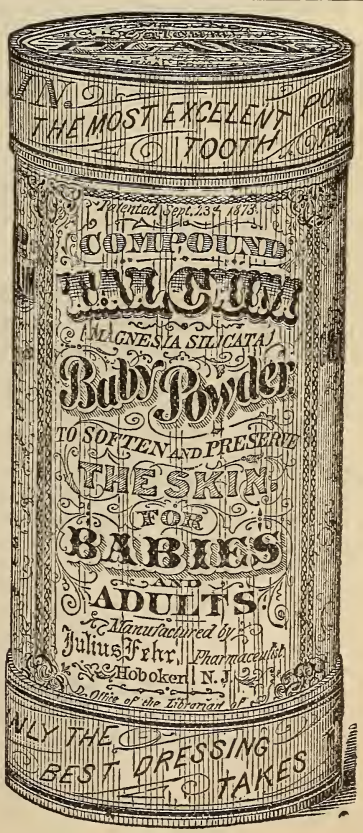

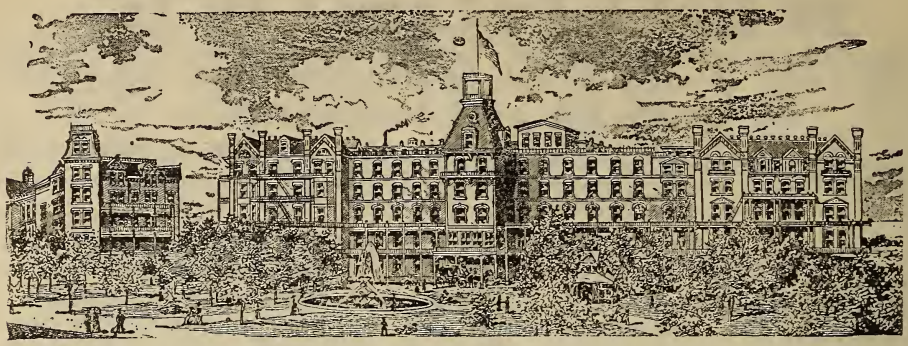

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Mix. Take one tablespoonful (30 grains Choralamid) in water.

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Notes on New Remedies.

Chloralamid in Epilepsy.

At the October meeting of the N. Y. Academy of Medicine, Dr. C. L. Dana, in speaking of the symptomatic treatment of epilepsy, refers to choralamid as follows: "The most valuable adjuvant was hydrate of chloral, but I have found a new drug in chloralamid which does all the good ascribed to the former drug without affecting the heart or circulation."

Piperazine and Urinary Calculi.

Interesting experiments have been made recently by Dr. FINZELBERG, Director of Schering's Research Laboratory, on the action of piperzine upon artificial urinary calculi consisting of pure uric acid, or that compound with calcium phosphate, or of ammonium urate, etc. The design was to ascertain whether piperazine had any solvent effect upon these. The result of the experiment showed that all the forms of concretions alluded to dissolved freely and perfectly within a comparatively short time in a one per cent. piperazine solution. In a few cases nothing remained but a light honeycombed skeleton, which consisted of the hardened cementing mucus. It was particularly noticed that the edges of the calculi, sometimes very sharp, dissolved away rapidly in the piperazine solution.—*Chemist and Druggist.*

Phenocoll Against Epidemic Influenza.

The study of the relationship between chemical constitution and physiological action is of comparatively recent date, but it has already led to results sufficiently interesting to make it evident that along this line promising work still remains to be done.

Dr. HANS ARONSON has recently made an investigation into the therapeutical effect of certain acid derivatives of acetanilid and phenacetin. He confirmed EHRLICH'S theory that the introduction of a sulphone group into the molecule of certain compounds which act upon the central nervous system, renders them inert as regard antipyretics, and he found that a very large number of acid derivatives of the bases mentioned are equally destitute of antifebrile effect.

He concludes with the observation (*Deutsche med. Wochenschrift*): The problem of obtaining soluble antipyretics from acetanilid, or rather phenacetin, has been recently solved in another way—namely, by the introduction into the molecule, not of acid, but of basic groups. To this category belongs *Phenocoll*, recently introduced into commerce and recommended on all hands as an antipyretic and anti-rheumatic. The compound is an amidated phenacetin, and is related to the body exactly in the same way as glycocoll to acetic acid. As an antineuralgic it exerted, in a few cases observed by me, a prompt and reliable effect.

It is also worthy of note that *Phenocoll* is being successfully given *against epidemic iufluenza*, which has reappeared here and there recently. This affection is so likely to be followed by severe sequelæ, that it is important to avoid lowering the vitality of the system in every possible way. In this respect Phenocoll is specially indicated, as it has been proved to have no deleterious effect upon the blood, such as most of the antipyretics in use undoubtedly have. According to all the authorities who have hitherto recorded their experiences with Phenocoll, it is free from all unpleasant or dangerous after-effects.

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This preparation produces results, which can not be obtained from the use of commercial Bromide substitutes.

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An ALLY of quinine—quinine CHECKS the Malarial Chill; Fucus Marina ELIMINATES the Malarial CAUSE; and thus prevents the recurrence of the Chill *after* it has been *checked* by quinine.

An INVALUABLE REMEDY in the treatment of Phthisis—it arrests the decay of lung tissue, diminishes the fever, lessens the cough, abates the soreness in the lungs, improves the appetite, and impedes the progressive emaciation.

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Uses: Biliousness, Jaundice, Dyspepsia, Constipation, and all Diseases Caused by Hepatic Torpor.

CHIONIA stimulates the Liver and restores it to a healthy condition, without debilitating the system by Catharsis; does not purge, per se, but under its use the Liver and Bowels gradually resume their normal functions.

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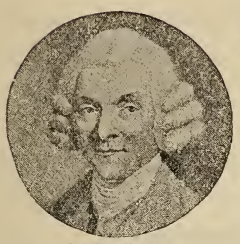
STUDY OF EXALGINE AFTER OBSERVATIONS MADE AT THE LARIBOISIÈRE HOSPITAL.

BY DR. ÉMILE DÉSIRÉ.

(*Concluded from last number.*)



William Hunter.

CASE 20.—R., a woman of 34. **Violent syphilitic cephalalgias** which prevented sleep and did not give way to specific treatment. May 9: four grains of exalgine twice. May 10: the same dose gave the patient a fairly good night. May 11: same dose; no more pain; appetite better. Took the drug until the 13th, when she left considering herself cured of the pain.

CASE 21.—B., woman of 22 years. Chloro-anæmia; neuro-pathic; has suffered with **cephalalgia** for three months. The pain comes on after dinner and continues until the next morning at 11 o'clock; it is accompanied with nausea, and has remained in spite of a great variety of treatment. May 11; 4 grains of exalgine at 2 and 5 o'clock P. M. Slept that evening without pain. The pain reappeared the next day but was again cured by the same doses. May 13: no more pain and the drug was suppressed. Eight days after there was no return of the complaints.

CASE 22.—T., man of 58; an **old facial neuralgia** with contracture. Took 4 grains of exalgine on the 27th, the 28th and 29th of May, at the end of which time the pain was less and the patient was able to sleep at night. May 30: 7 grains of the drug caused still greater improvement. This dose was continued for five days with result of a perfect cure.

CASE 23.—T., a girl of 19. Accident to wisdom tooth. Suffered much from **facial neuralgia** on the same side. June 1 to 5: 4 grains of exalgine twice daily; the pain disappeared and the patient left.

CASE 24.—I., aged 28: chloro-anæmic; **cephalalgia**. Four grains of exalgine from June 1 to 6; not much improvement until June 5. June 7: the cure is complete.

CASE 25.—L., woman of 37. **Bone-pains** in a syphilitic subjected to specific treatment. For five days took four grains of exalgine without much effect. On June 1 the dose was increased to 7 grains, and a relatively good night passed. June 2, same dose; pain only at times. June 3; 4 grains: scarcely any pain. This last dose was continued for five days, and the patient complained no more of suffering.

CASE 26.—M., woman of 40 years. **Occipito-facial neuralgia** for 14 days, unable to leave her bed. May 23 to 26: 4 grains of exalgine; May 27 to June 1: 7 grains; June 2 to June 4: 12 grains of exalgine, with no improvement. June 5, 15 grains produced sensible improvement. This last dose was continued to June 8, when the pains returned and the drug was stopped.

CASE 27.—G., woman of 23; **dysphagia** with aryteno-epiglottis in a tuberculous patient. June 1: 4 grains of exalgine, which was continued for some days. Amelioration was manifested on the first day and the improvement continued until she left the hospital.

CASE 28.—J., 27; **intercostal neuralgia**. Four grains of exalgine from the 1st to the 8th of June with gradual amelioration and cure of the pain.

CASE 29.—A., woman of 29. **Dysphagia** with aryteno-epiglottitis in a tuberculous patient. Four grains of exalgine from May 27 to June 3. Improvement began on the first day and deglutition was painless on the last.

CASE 30.—R., woman of 24. **Inter-costal neuralgia:** pains in the head almost continuous. Four grains of exalgine for eight days, when the patient considered herself well and left.

CASE 31.—F., woman of 30. Similar to Case 30, except that the dose was increased to 7 grains on the third day.

CASE 32.—L., woman of 49. **Old intercostal neuralgia,** which had rebelled against all kinds of treatment. Four grains of exalgine were given for a few days, with little amelioration; there was some vertigo, but it did not interfere with treatment. On June 3, the dose was increased to 7 grains, with very sensible improvement. June 5, the vertigo had disappeared and the pain was almost nothing. June 8, the patient left, cured, having taken 7 grains of the exalgine without inconvenience.

TABLE OF THE CASES TREATED BY EXALGINE.

	NO. OF CASES TREATED.	SUCCESSFUL OR AMELIORATED	UNSUCCESSFUL
Facial Neuralgia	3	2	1
Intercostal Neuralgia	4	3	1
Migraine	5	5	—
Hysteralgia	2	2	—
Bone-pains of syphilis	4	4	—
Dysphagia	8	8	—
Subacute Rheumatism	2	2	—
Subacute Sciatica	2	2	—
Laryngeal Epithelioma	1	1	—
Dental Neuralgia	1	1	—
	32	30	2

Conclusions—We have employed exalgine entirely as an analgesic and not as an antipyretic; we have not given it where fever was present.

The great diversity of affections in which we have employed exalgine with success authorize us to conclude that, without prejudice to general treatment, it is an admirable specific against pain.—*Society for Scientific Studies*, Paris.

THE END.

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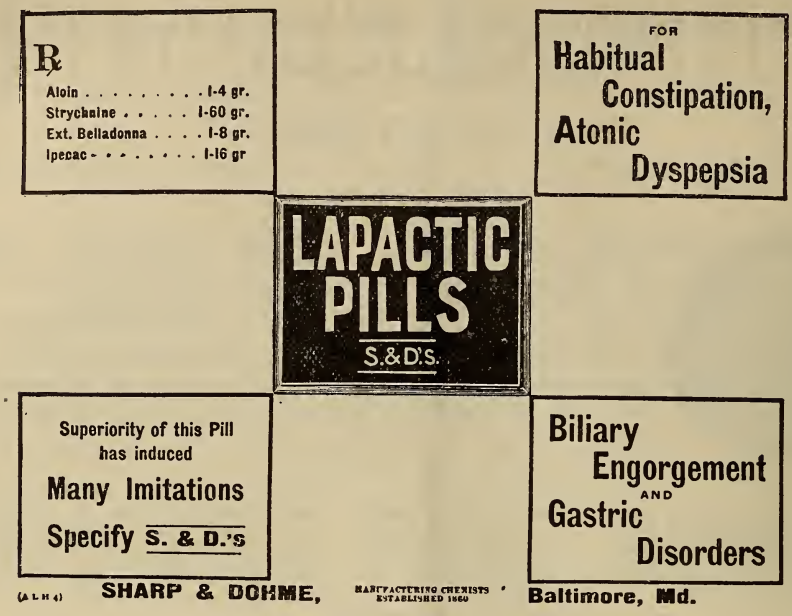
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Ipecac - - - - - - - I-16 gr
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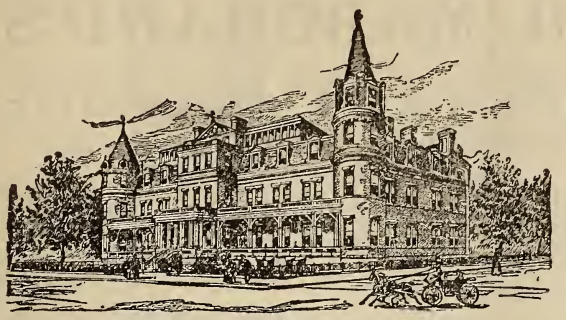

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Notes on New Remedies.

Chloralamid in Epilepsy.

At the October meeting of the N. Y. Academy of Medicine, Dr. C. L. Dana, in speaking of the symptomatic treatment of epilepsy, refers to choralamid as follows: "The most valuable adjuvant was hydrate of chloral, but I have found a new drug in chloralamid which does all the good ascribed to the former drug without affecting the heart or circulation."

Piperazine and Urinary Calculi.

Interesting experiments have been made recently by Dr. FINZELBERG, Director of Schering's Research Laboratory, on the action of piperzine upon artificial urinary calculi consisting of pure uric acid, or that compound with calcium phosphate, or of ammonium urate, etc. The design was to ascertain whether piperazine had any solvent effect upon these. The result of the experiment showed that all the forms of concretions alluded to dissolved freely and perfectly within a comparatively short time in a one per cent. piperazine solution. In a few cases nothing remained but a light honeycombed skeleton, which consisted of the hardened cementing mucus. It was particularly noticed that the edges of the calculi, sometimes very sharp, dissolved away rapidly in the piperazine solution.—*Chemist and Druggist.*

Phenocoll Against Epidemic Influenza.

The study of the relationship between chemical constitution and physiological action is of comparatively recent date, but it has already led to results sufficiently interesting to make it evident that along this line promising work still remains to be done.

Dr. HANS ARONSON has recently made an investigation into the therapeutical effect of certain acid derivatives of acetanilid and phenacetin. He confirmed EHRLICH'S theory that the introduction of a sulphone group into the molecule of certain compounds which act upon the central nervous system, renders them inert as regard antipyretics, and he found that a very large number of acid derivatives of the bases mentioned are equally destitute of antifebrile effect.

He concludes with the observation (*Deutsche med. Wochenschrift*): The problem of obtaining soluble antipyretics from acetanilid, or rather phenacetin, has been recently solved in another way—namely, by the introduction into the molecule, not of acid, but of basic groups. To this category belongs *Phenocoll*, recently introduced into commerce and recommended on all hands as an antipyretic and anti-rheumatic. The compound is an amidated phenacetin, and is related to the body exactly in the same way as glycocoll to acetic acid. As an antineuralgic it exerted, in a few cases observed by me, a prompt and reliable effect.

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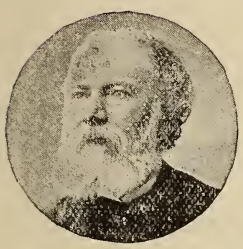
NOTE UPON A POSSIBLE SERVICE TO BE EXPECTED FROM DIURETIN IN GENITO-URINARY SURGERY

BY EDWARD L. KEYES, M. D., NEW YORK.

(*Medical News, Philadelphia, 1891, October.*)



Fr. Dumontpallier.

IN June last I went to a city near New York to take a large stone from the bladder of an old gentleman, and at the same time to remove an outstanding third lobe. His case was desperate. He had suffered long, and for four years he had been an invalid, spending most of the last year in bed, taking opium suppositories, and passing his catheter hourly sometimes, and again at longer intervals. He could not urinate at all without the catheter. I cut this patient above the pubes, and took out a stone as large as an egg and a prostatic third lobe as large as the last joint of the thumb. The bladder was thin-walled, corrugated, trabeculated, and sacculated. I put my finger into holes on each side which seemed like ureteral orifices, but did not stop to investigate closely. They could not have been orifices of the ureters, because they are closed even when the ducts are enormously dilated. His urine had been like gruel, full of albumen and all sorts of detritus. There was no question of there being dilated ureters, pyelitis, and more or less interstitial nephritis on both sides. The operation was done simply because it had to be done in compassion for the old man's sufferings. The outlook was desperate.

I thought then, of trying diuretin, and telephoned for it before the patient recovered from his anesthetic, ordering 10 grains to be given at once, and frequently repeated. This patient got well.

Since that time I have used diuretin in every case of urethral or bladder operation that has fallen under my hands. I give 60 grains of salol per day for forty-eight hours before operating, and commence diuretin on the day of the operation; given it also in doses of 10 grains every four hours for forty-eight hours. I, of course, irrigate the bladder and urethra; I did this before, but my results have been better since using the diuretin. I have used it in every major operation that I have performed, and my assistant, Dr. Fuller, has used it twice, and in no instance has there been any urinary fever proper—that is, there never has been a chill or a suppression. The cases cover all ages from eighteen to eighty, with desperate complications, such as pyelitis, urine loaded with albumen and casts, diabetes, etc. Patients have had shock, fever sometimes, and various complications, but never chill or suppression. The number operated on is 13; not large, it is true, but it was in the summer season, and all were private patients. The time is too short for generalization, but when it is remembered that the cases were: Supra-pubic prostatectomy, 6; supra-pubic lithotomy (diabetes), 1; perineal section, 3; perineal section without guide, 2; litholapaxy, 1; mostly in old men with damaged kidneys, all of whom recovered without chill or any tendency to suppression, it is fair to imagine that the means used had something to do with it, and the diuretin is the only new drug. In three of the cases there was profound shock after the chloroform (which I now always use), but the kidneys acted all along.

Diuretin appears to be a diuretic, seemingly pretty constant in its action. It does not irritate the stomach, bowels, or nerves, and does not depress a weak heart. The dose is 10 to 15 grains often repeated, to 90 or even 120 grains a day, given in powder or in pill form—preferably gelatin-coated pill, as the powder deteriorates on exposure. If it will prevent, or even moderate urinary fever, it is a valuable drug.—*Medical News, Philadelphia.*

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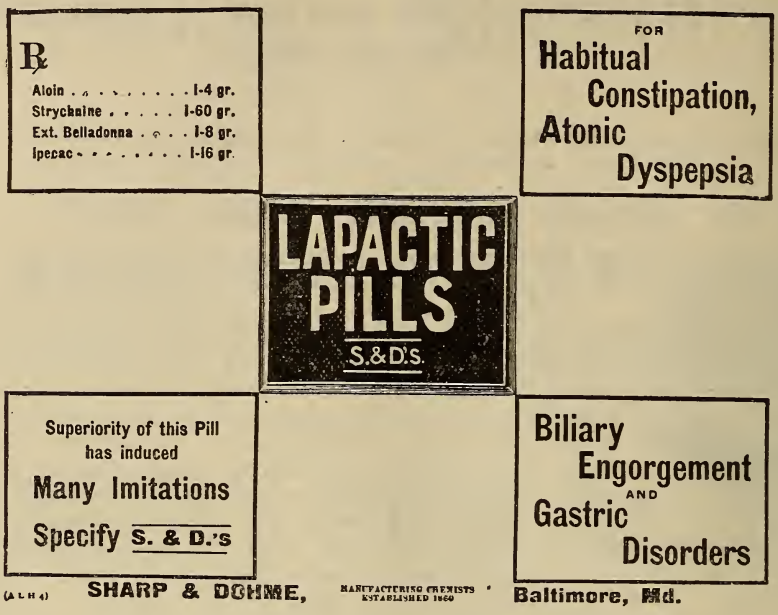
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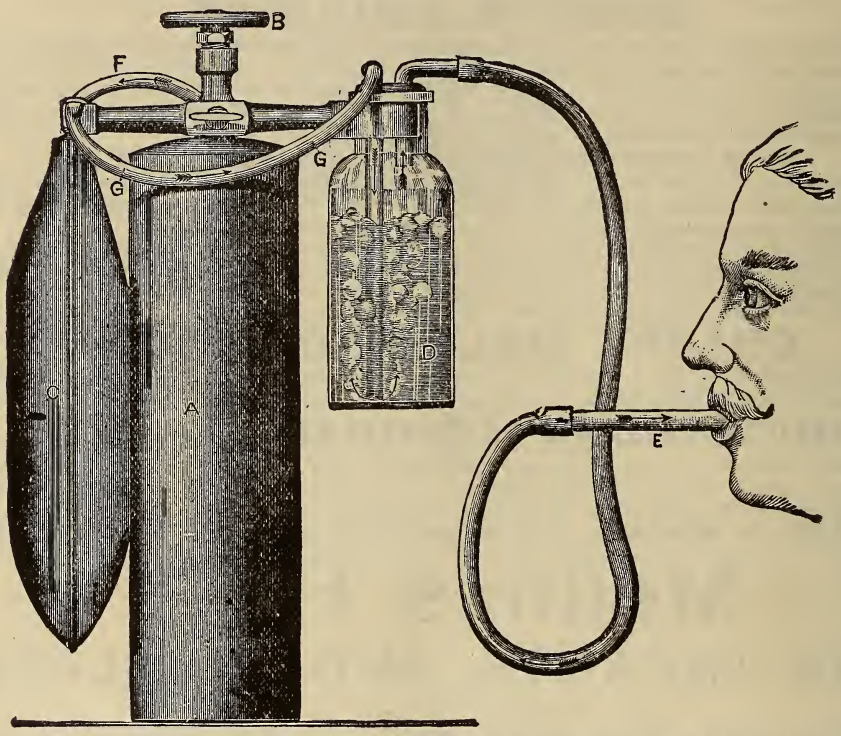

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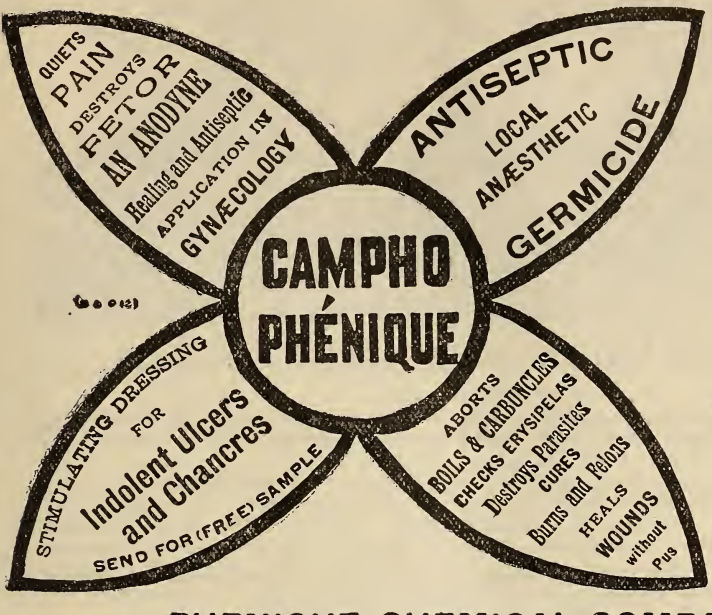

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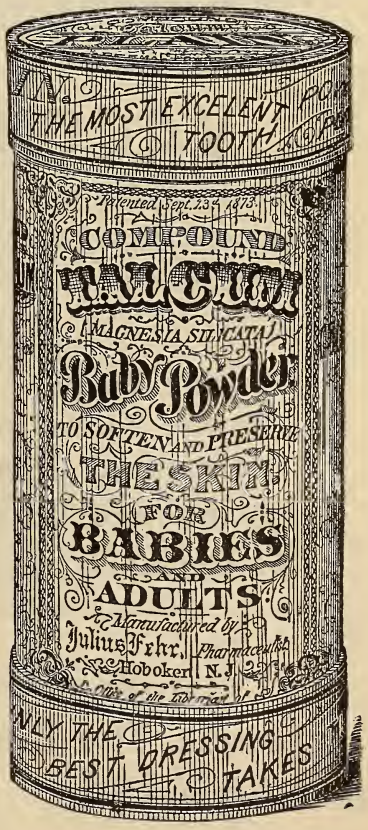

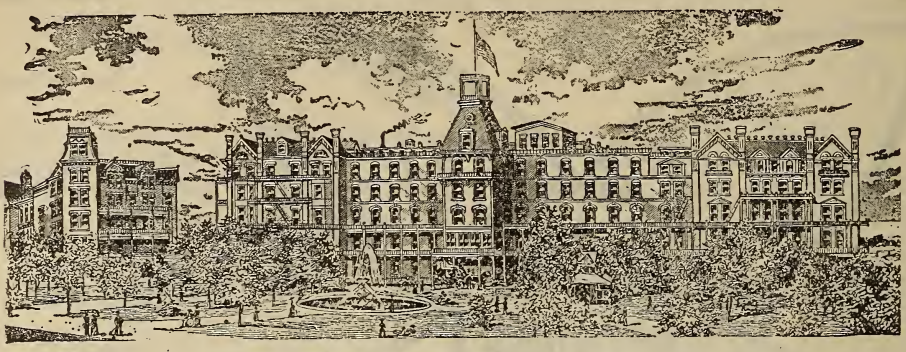

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BY EDWARD L. KEYES, M. D., NEW YORK.

(*Medical News, Philadelphia, 1891, October.*)

Dr. Brouardel.

IN June last I went to a city near New York to take a large stone from the bladder of an old gentleman, and at the same time to remove an outstanding third lobe. His case was desperate. He had suffered long, and for four years he had been an invalid, spending most of the last year in bed, taking opium suppositories, and passing his catheter hourly sometimes, and again at longer intervals. He could not urinate at all without the catheter. I cut this patient above the pubes, and took out a stone as large as an egg and a prostatic third lobe as large as the last joint of the thumb. The bladder was thin-walled, corrugated, trabeculated, and sacculated. I put my finger into holes on each side which seemed like ureteral orifices, but did not stop to investigate closely. They could not have been orifices of the ureters, because they are closed even when the ducts are enormously dilated. His urine had been like gruel, full of albumen and all sorts of detritus. There was no question of there being dilated ureters, pyelitis, and more or less interstitial nephritis on both sides. The operation was done simply because it had to be done in compassion for the old man's sufferings. The outlook was desperate.

I thought then, of trying diuretin, and telephoned for it before the patient recovered from his anesthetic, ordering 10 grains to be given at once, and frequently repeated. This patient got well.

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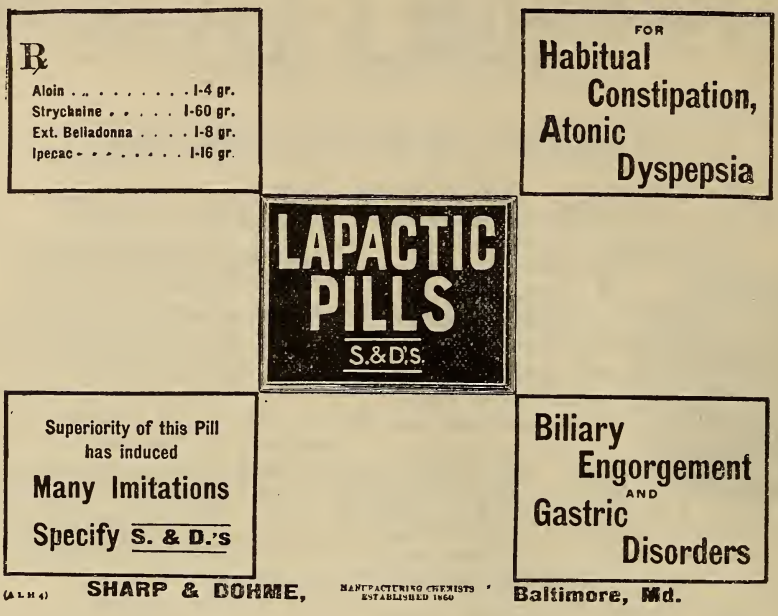
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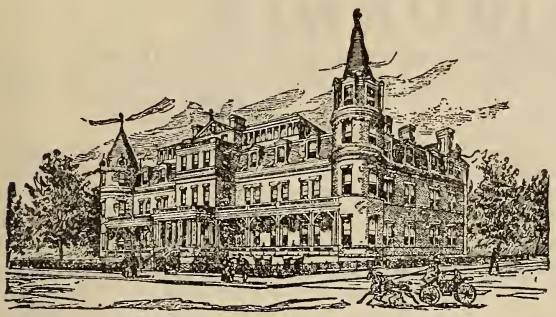

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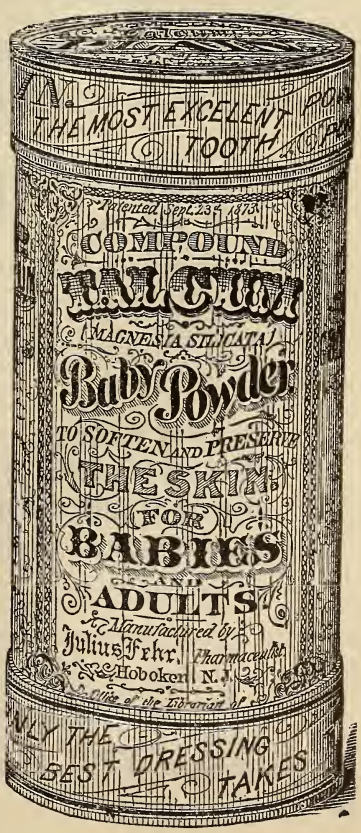

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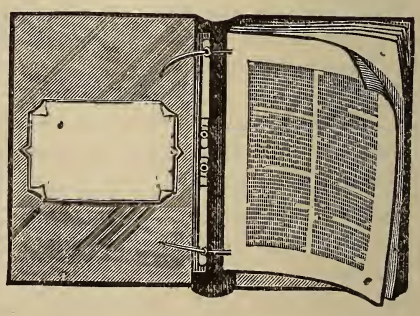

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(*Medical News, Philadelphia, 1891, October.*)

Dr. Budin.

IN June last I went to a city near New York to take a large stone from the bladder of an old gentleman, and at the same time to remove an outstanding third lobe. His case was desperate. He had suffered long, and for four years he had been an invalid, spending most of the last year in bed, taking opium suppositories, and passing his catheter hourly sometimes, and again at longer intervals. He could not urinate at all without the catheter. I cut this patient above the pubes, and took out a stone as large as an egg and a prostatic third lobe as large as the last joint of the thumb. The bladder was thin-walled, corrugated, trabeculated, and sacculated. I put my finger into holes on each side which seemed like ureteral orifices, but did not stop to investigate closely. They could not have been orifices of the ureters, because they are closed even when the ducts are enormously dilated. His urine had been like gruel, full of albumen and all sorts of detritus. There was no question of there being dilated ureters, pyelitis, and more or less interstitial nephritis on both sides. The operation was done simply because it had to be done in compassion for the old man's sufferings. The outlook was desperate.

I thought then, of trying diuretin, and telephoned for it before the patient recovered from his anesthetic, ordering 10 grains to be given at once, and frequently repeated. This patient got well.

Since that time I have used diuretin in every case of urethral or bladder operation that has fallen under my hands. I give 60 grains of salol per day for forty-eight hours before operating, and commence diuretin on the day of the operation; given it also in doses of 10 grains every four hours for forty-eight hours. I, of course, irrigate the bladder and urethra; I did this before, but my results have been better since using the diuretin. I have used it in every major operation that I have performed, and my assistant, Dr. Fuller, has used it twice, and in no instance has there been any urinary fever proper—that is, there never has been a chill or a suppression. The cases cover all ages from eighteen to eighty, with desperate complications, such as pyelitis, urine loaded with albumen and casts, diabetes, etc. Patients have had shock, fever sometimes, and various complications, but never chill or suppression. The number operated on is 13; not large, it is true, but it was in the summer season, and all were private patients. The time is too short for generalization, but when it is remembered that the cases were: Supra-pubic prostatectomy, 6; supra-pubic lithotomy (diabetes), 1; perineal section, 3; perineal section without guide, 2; litholapaxy, 1; mostly in old men with damaged kidneys, all of whom recovered without chill or any tendency to suppression, it is fair to imagine that the means used had something to do with it, and the diuretin is the only new drug. In three of the cases there was profound shock after the chloroform (which I now always use), but the kidneys acted all along.

Diuretin appears to be a diuretic, seemingly pretty constant in its action. It does not irritate the stomach, bowels, or nerves, and does not depress a weak heart. The dose is 10 to 15 grains often repeated, to 90 or even 120 grains a day, given in powder or in pill form—preferably gelatin-coated pill, as the powder deteriorates on exposure. If it will prevent, or even moderate urinary fever, it is a valuable drug.—*Medical News, Philadelphia.*

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All the observations in this pamphlet have reference to the use of the preparation of Knoll & Co.; as there are imitations in the market, physicians should see that the genuine is supplied. It is put up only in original vials of one ounce, and in McK. & R. 5 gr. pills in bottles of 100 and 500 each, and is plainly labeled DIURETIN–KNOLL.

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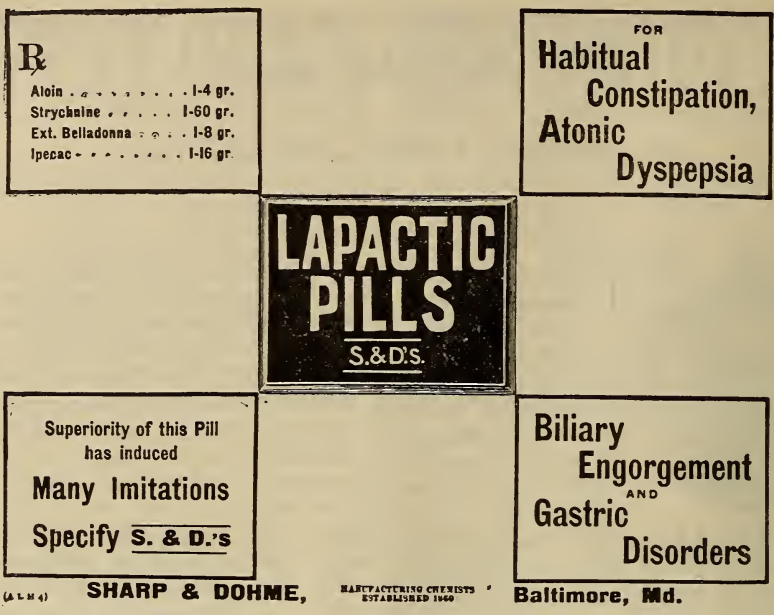
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Strychnine . . . . . 1-60 gr.
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FOR
Habitual Constipation, Atonic Dyspepsia
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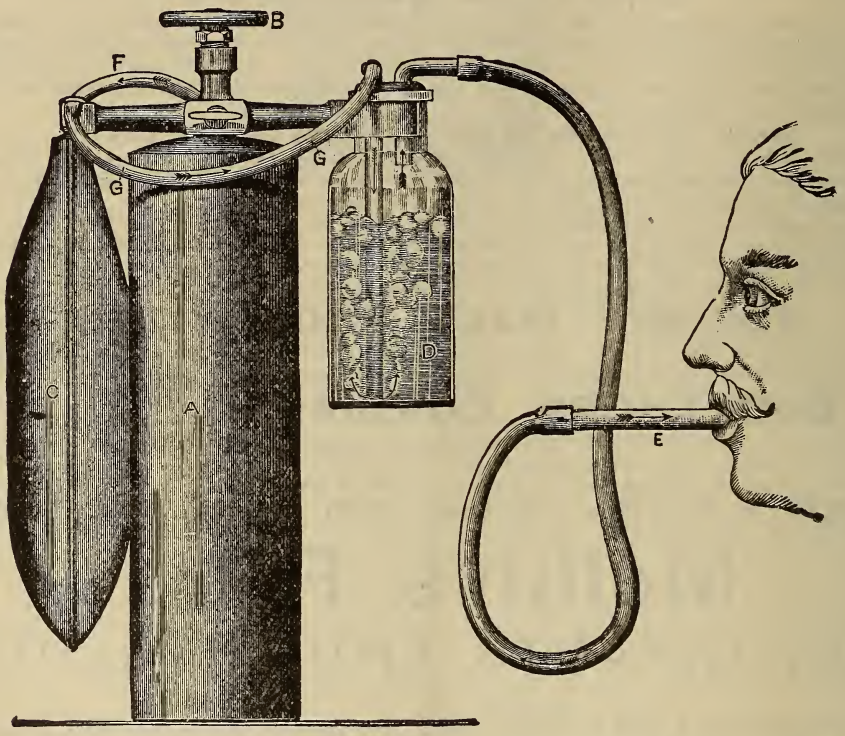

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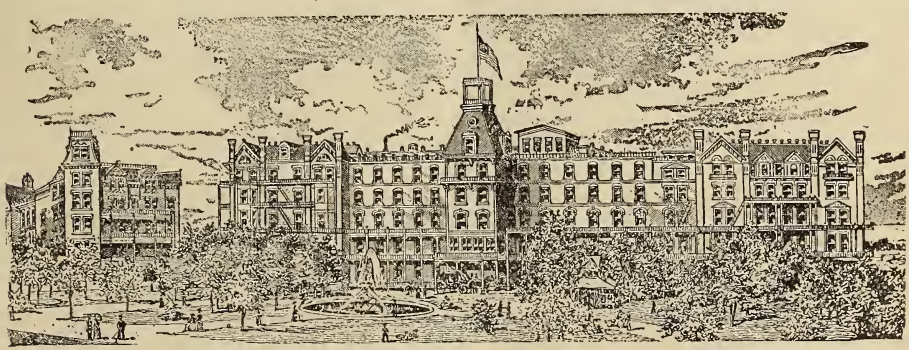

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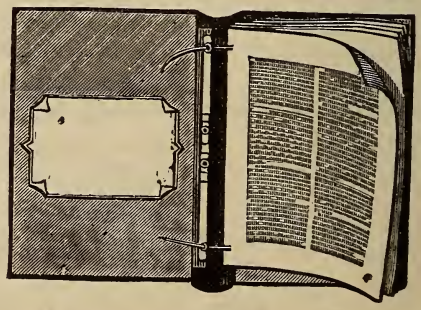

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(*Medical News, Philadelphia, 1891, October.*)

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IN June last I went to a city near New York to take a large stone from the bladder of an old gentleman, and at the same time to remove an outstanding third lobe. His case was desperate. He had suffered long, and for four years he had been an invalid, spending most of the last year in bed, taking opium suppositories, and passing his catheter hourly sometimes, and again at longer intervals. He could not urinate at all without the catheter. I cut this patient above the pubes, and took out a stone as large as an egg and a prostatic third lobe as large as the last joint of the thumb. The bladder was thin-walled, corrugated, trabeculated, and sacculated. I put my finger into holes on each side which seemed like ureteral orifices, but did not stop to investigate closely. They could not have been orifices of the ureters, because they are closed even when the ducts are enormously dilated. His urine had been like gruel, full of albumen and all sorts of detritus. There was no question of there being dilated ureters, pyelitis, and more or less interstitial nephritis on both sides. The operation was done simply because it had to be done in compassion for the old man's sufferings. The outlook was desperate.

I thought then, of trying diuretin, and telephoned for it before the patient recovered from his anesthetic, ordering 10 grains to be given at once, and frequently repeated. This patient got well.

Since that time I have used diuretin in every case of urethral or bladder operation that has fallen under my hands. I give 60 grains of salol per day for forty-eight hours before operating, and commence diuretin on the day of the operation; given it also in doses of 10 grains every four hours for forty-eight hours. I, of course, irrigate the bladder and urethra; I did this before, but my results have been better since using the diuretin. I have used it in every major operation that I have performed, and my assistant, Dr. Fuller, has used it twice, and in no instance has there been any urinary fever proper—that is, there never has been a chill or a suppression. The cases cover all ages from eighteen to eighty, with desperate complications, such as pyelitis, urine loaded with albumen and casts, diabetes, etc. Patients have had shock, fever sometimes, and various complications, but never chill or suppression. The number operated on is 13; not large, it is true, but it was in the summer season, and all were private patients. The time is too short for generalization, but when it is remembered that the cases were: Supra-pubic prostatectomy, 6; supra-pubic lithotomy (diabetes), 1; perineal section, 3; perineal section without guide, 2; litholapaxy, 1; mostly in old men with damaged kidneys, all of whom recovered without chill or any tendency to suppression, it is fair to imagine that the means used had something to do with it, and the diuretin is the only new drug. In three of the cases there was profound shock after the chloroform (which I now always use), but the kidneys acted all along.

Diuretin appears to be a diuretic, seemingly pretty constant in its action. It does not irritate the stomach, bowels, or nerves, and does not depress a weak heart. The dose is 10 to 15 grains often repeated, to 90 or even 120 grains a day, given in powder or in pill form—preferably gelatin-coated pill, as the powder deteriorates on exposure. If it will prevent, or even moderate urinary fever, it is a valuable drug.—*Medical News, Philadelphia.*

McKesson & Robbins' Gelatine Coated Pills of Diuretin-Knoll, 5 grains.

CAUTION!

All the observations in this pamphlet have reference to the use of the preparation of Knoll & Co.; as there are imitations in the market, physicians should see that the genuine is supplied. It is put up only in original vials of one ounce, and in McK. & R. 5 gr. pills in bottles of 100 and 500 each, and is plainly labeled DIURETIN–KNOLL.

Full notes sent on request, by
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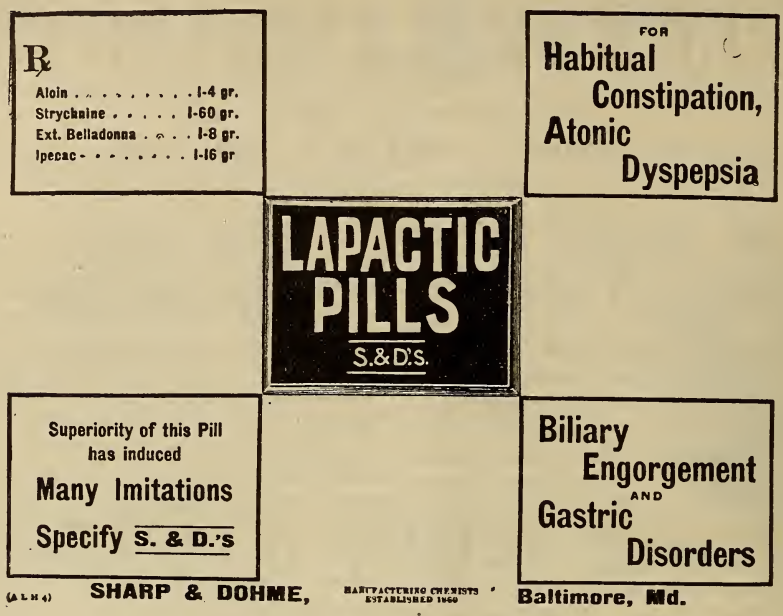
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The sugar formed by the action of the Ptyalin of the Saliva and the Amylopsin of the Pancreas upon starch is MALTOSE. In the digestive tract MALTOSE is absorbed UNCHANGED.

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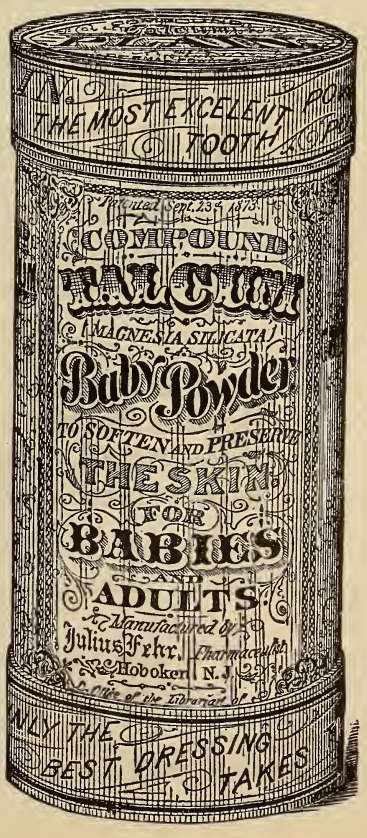

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DOSE.—

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Same as Opium or Morphia.

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USES: EPILEPSY, UTERINE CONGESTION, HEADACHE, AND ALL CONGESTIVE, CONVULSIVE AND REFLEX NEUROSES.

This preparation produces results, which can not be obtained from the use of commercial Bromide substitutes.

DOSE.—One to two FLUID drachms, in WATER, three or more times a day.

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From Sea Weed. **Uses: Malaria, Phthisis, Etc.**

An ALLY of quinine—quinine CHECKS the Malarial Chill; Fucus Marina ELIMINATES the Malarial CAUSE; and thus prevents the recurrence of the Chill *after* it has been *checked* by quinine.

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DOSE.—One Teaspoonful IN WATER, four times a day.

CHIONIA FROM CHIONANTHUS.

Uses: Biliousness, Jaundice, Dyspepsia, Constipation, and all Diseases Caused by Hepatic Torpor.

CHIONIA stimulates the Liver and restores it to a healthy condition, without debilitating the system by Catharsis; does not purge, per se, but under its use the Liver and Bowels gradually resume their normal functions.

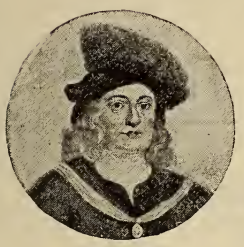
DOSE.—One Fluid Drachm three times a day.

PEACOCK CHEMICAL CO., ST. LOUIS.

NOTE UPON A POSSIBLE SERVICE TO BE EXPECTED FROM DIURETIN IN GENITO-URINARY SURGERY.

BY EDWARD L. KEYES, M. D., NEW YORK.

(*Medical News, Philadelphia, 1891, October.*)



Paracelsus.

IN June last I went to a city near New York to take a large stone from the bladder of an old gentleman, and at the same time to remove an outstanding third lobe. His case was desperate. He had suffered long, and for four years he had been an invalid, spending most of the last year in bed, taking opium suppositories, and passing his catheter hourly sometimes, and again at longer intervals. He could not urinate at all without the catheter. I cut this patient above the pubes, and took out a stone as large as an egg and a prostatic third lobe as large as the last joint of the thumb. The bladder was thin-walled, corrugated, trabeculated, and sacculated. I put my finger into holes on each side which seemed like ureteral orifices, but did not stop to investigate closely. They could not have been orifices of the ureters, because they are closed even when the ducts are enormously dilated. His urine had been like gruel, full of albumen and all sorts of detritus. There was no question of there being dilated ureters, pyelitis, and more or less interstitial nephritis on both sides. The operation was done simply because it had to be done in compassion for the old man's sufferings. The outlook was desperate.

I thought then, of trying diuretin, and telephoned for it before the patient recovered from his anesthetic, ordering 10 grains to be given at once, and frequently repeated. This patient got well.

Since that time I have used diuretin in every case of urethral or bladder operation that has fallen under my hands. I give 60 grains of salol per day for forty-eight hours before operating, and commence diuretin on the day of the operation; given it also in doses of 10 grains every four hours for forty-eight hours. I, of course, irrigate the bladder and urethra; I did this before, but my results have been better since using the diuretin. I have used it in every major operation that I have performed, and my assistant, Dr. Fuller, has used it twice, and in no instance has there been any urinary fever proper—that is, there never has been a chill or a suppression. The cases cover all ages from eighteen to eighty, with desperate complications, such as pyelitis, urine loaded with albumen and casts, diabetes, etc. Patients have had shock, fever sometimes, and various complications, but never chill or suppression. The number operated on is 13; not large, it is true, but it was in the summer season, and all were private patients. The time is too short for generalization, but when it is remembered that the cases were: Supra-pubic prostatectomy, 6; supra-pubic lithotomy (diabetes), 1; perineal section, 3; perineal section without guide, 2; litholapaxy, 1; mostly in old men with damaged kidneys, all of whom recovered without chill or any tendency to suppression, it is fair to imagine that the means used had something to do with it, and the diuretin is the only new drug. In three of the cases there was profound shock after the chloroform (which I now always use), but the kidneys acted all along.

Diuretin appears to be a diuretic, seemingly pretty constant in its action. It does not irritate the stomach, bowels, or nerves, and does not depress a weak heart. The dose is 10 to 15 grains often repeated, to 90 or even 120 grains a day, given in powder or in pill form—preferably gelatin-coated pill, as the powder deteriorates on exposure. If it will prevent, or even moderate urinary fever, it is a valuable drug.—*Medical News, Philadelphia.*

McKesson & Robbins' Gelatine Coated Pills of Diuretin-Knoll, 5 grains.

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All the observations in this pamphlet have reference to the use of the preparation of Knoll & Co.; as there are imitations in the market, physicians should see that the genuine is supplied. It is put up only in original vials of one ounce, and in McK. & R. 5 gr. pills in bottles of 100 and 500 each, and is plainly labeled DIURETIN–KNOLL.

Full notes sent on request, by
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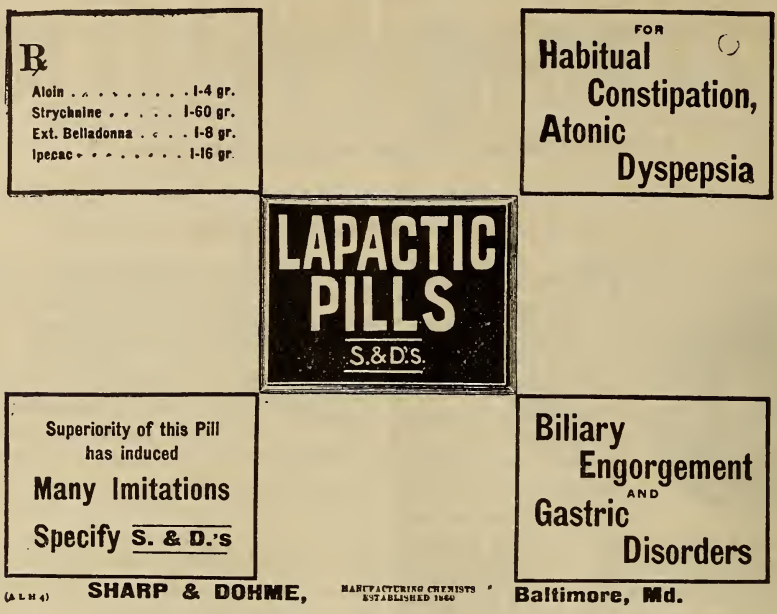

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A combination introduced by us and found in practice to possess superior advantages over other similar formulas. The well known mild action of Aloin on the lower portion of the intestinal canal, and its power of stimulating the hepatic functions, is supplemented by the action of Ipecac as a stomachic tonic and by increasing the gastric secretions; the Belladonna acts specially upon the involuntary muscular fibres of the bowels, increasing peristalsis, diminishing the harshness, and at the same time increasing the effectiveness of the laxative. The general tonic effect of Strychnine upon the stomach and bowels and its direct action upon the sympathetic, make it a valuable addition in the permanent cure of **habitual constipation and atonic dyspepsia.**

Since we first called attention to our Lapactic Pills, some four years ago—publishing the composition of the same—a number of manufacturers have adopted the formula and have furnished these pills under the same name. Should Physicians fail to obtain satisfactory results from Lapactic Pills not of our make (and we have received a large number of such complaints from physicians by letter), we shall be glad to furnish a sample of our Lapactic Pills on application. We feel confident that they will fully substantiate our claims.

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A SOLUBLE DRY EXTRACT, prepared from Malted Barley and Wheat, consisting of Dextrin, Maltose, Albuminates, and Salts.

The SUGAR in MELLIN'S FOOD is MALTOSE. MALTOSE is the PROPER SUGAR for use in connection with cow's milk.

The sugar formed by the action of the Ptyalin of the Saliva and the Amylopsin of the Pancreas upon starch is MALTOSE. In the digestive tract MALTOSE is absorbed UNCHANGED.

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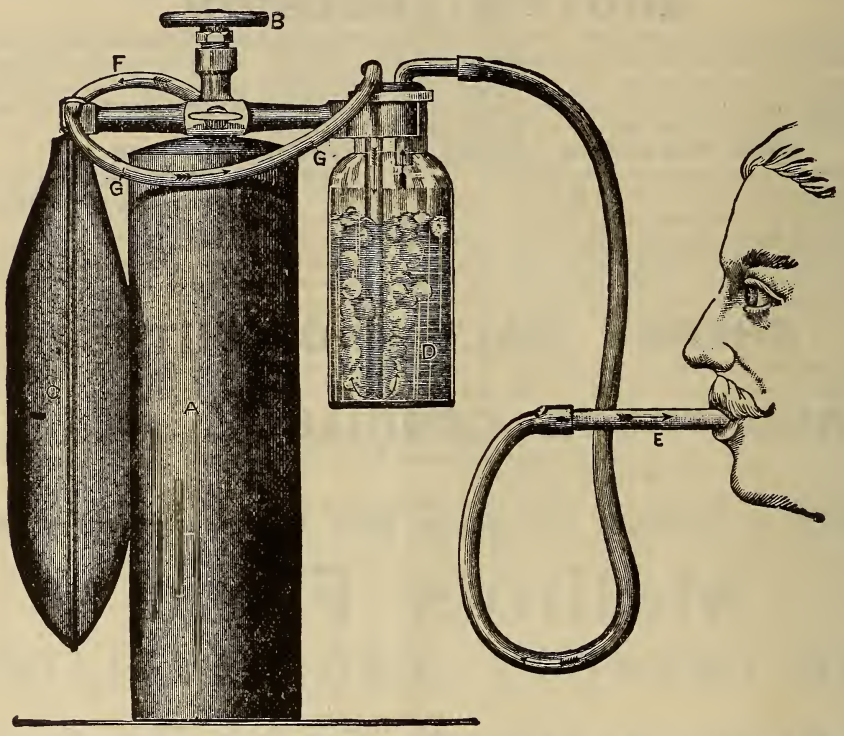

In the treatment of lung troubles by Oxygen its exhibition by inhalation is preferred. The apparatus herewith shown is a modification of the Nitrous Oxide apparatus which we have supplied for many years. It is made in the best manner throughout, and is the outcome of years of experience in the manufacture of gas apparatus. It will be found to meet all the requirements.

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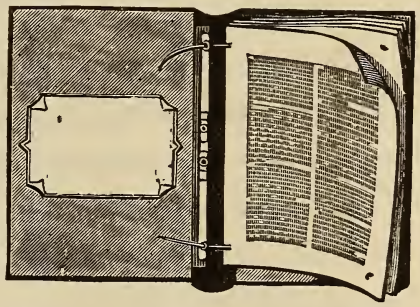

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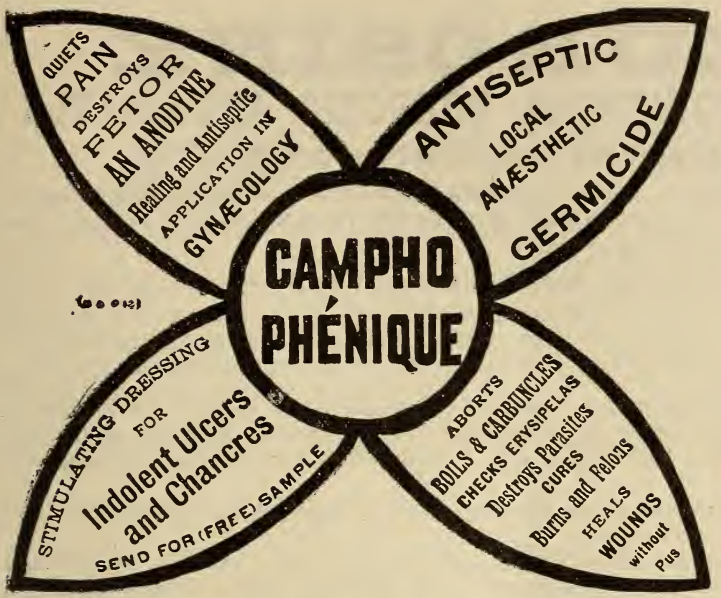

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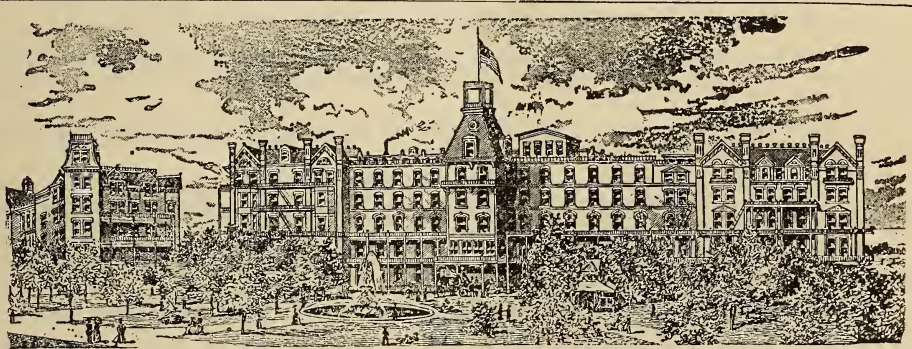

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At this season of the year the practitioner is called upon to treat patients who have spent a large portion of their time in the house during the winter. They have been breathing the confined house-air which, besides being rendered deficient in oxygen by the necessary combustion going on in stoves, lamps and gas-jets, is, in addition, more or less vitiated by the poisonous emanations of organic life.

During most of this time there has been imperfect physiological action because there has been incomplete oxidation. The intercellular spaces of the tissues have become clogged up with products of incomplete combustion—imperfect waste and repair.

In consequence of these facts we notice a preponderance of those diseases usually attributed to that indefinite cause—impure blood.

Hence we observe the tendency to scrofulous manifestations—eruptions, glandular swellings, abscesses and ulcerations; also the tendency to a breaking down of the nervous system, with its varied pheuomena; the tendency, again, to a lack of prompt response to treatment in acute diseases and slow convalescence from them; and finally, the tendency on the part of inflammatory conditions of the air passages at this time, unless specially guarded, to become chronic or to develop active degenerative and destructive processes.

To correct this condition we need a remedy that promotes oxidation within the tissues, themselves.

Such a remedy is found in the hypophosphites of lime and soda. However, not only does it thus promote active oxidation, but it also is itself deposited, in its changed or oxidized condition, within the tissues as direct reconstructive material, indispensable to healthy cells and sound tissue-walls.

Thus it proves to be the true alterative agent, inasmuch as it at the same time renovates and nourishes.

Under this remedy we observe an awakened organic action throughout the system and an improvement in every tissue. We soon observe better muscles, bones, nerves, hair, nails, skin, and mucous and serous membranes. The entire system awakens to a more vigorous life and performs its various functions with renewed activity.

In these facts may be seen indications for the use of this remedy, especially at this season of the year, in cases which show consumptive, scrofulous or nervous tendencies.

It is quite important, however, to obtain these delicate and unstable salts in an absolutely pure condition and put up in a form to secure the permanence of their composition. This can be accomplished by prescribing McArthur's Syrup, in which the chemically pure hypophosphites of lime and soda are incorporated in a wholesome syrup. Good results are uniformly reported from its use.

You will receive a full bottle of the syrup for test in your practice by writing to the McArthur Hypophosphite Co., Boston, Mass., and agreeing to pay express charges.

VIN MARIANI

"The Standard Preparation of Erythoxylon Coca."

CAREFUL, continued testing by upwards of seven thousand practitioners in America, whose written opinions over their signatures (in our possession) are fully in accord and clearly prove the efficacy and merits of "VIN MARIANI," may be thus summarized:

"Diffusible stimulant and tonic in anæmia, nervous depression, sequelæ of childbirth, lymphatism, tardy convalescence, general 'Malaise,' and after wasting fevers.

"Special reference to the nervous system, in all morbid states, melancholia, etc.

"Tonic in laryngeal and gastric complications, stomach troubles.

"All cases where a general toning or strengthening of the system is needed.

"The only tonic stimulant without any unpleasant reaction, and may be given indefinitely, never causing constipation."

N. B.—This Wine has been found always uniform and reliable, owing to the selection of the finest ingredients and the greatest accuracy in its manipulation. When prescribing, therefore, the Medical Profession are strongly advised to specify "VIN MARIANI," in order to avoid the substitution of imitations, often worthless and consequently disappointing in effect.

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Per case of Half-Dozen Bottles, . . 6.00.
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There is no better form for administering Chloralamid-Schering, and physicians will surely give it their preference.

It is desired that this bottle be delivered on physician's prescription complete and unopened,—first writing the necessary facts on label on opposite side.

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Chloralamid

(SCHERING)

Each tablespoonful contains one gramme (15 grains) of Chloralamid-Schering.

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Chloralamid-SCHERING is a superior hypnotic; an efficient and safe sleep-producing agent; its use is not attended by unpleasant and untoward side or after-effects, nor will continued use develop a habit or necessitate increasing doses. Eminent medical authorities have endorsed Chloralamid, and full clinical reports with chemical and therapeutical data will be furnished to physicians and pharmacists on request.

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This preparation produces results, which can not be obtained from the use of commercial Bromide substitutes.

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An INVALUABLE REMEDY in the treatment of Phthisis—it arrests the decay of lung tissue, diminishes the fever, lessens the cough, abates the soreness in the lungs, improves the appetite, and impedes the progressive emaciation.

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CHIONIA stimulates the Liver and restores it to a healthy condition, without debilitating the system by Catharsis; does not purge, per se, but under its use the Liver and Bowels gradually resume their normal functions.

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PEACOCK CHEMICAL CO., ST. LOUIS.

CARDIAC AND RENAL AFFECTIONS TREATED BY DIURETIN-KNOLL.

BY PROFESSOR M SIUS.

Sir James Paget.

CASE I.—N. S., æt. 53. Arterio-sclerosis; aortic insufficiency. Excentric hypertrophy of the heart. Bronchitis. Pulmonary hypostasis. Œdema of the inferior members reaching to the hips.

DATE.	DIURETIN. GRAMMES.	PULSE.	URINE. CCM.	
March 26,	0	100	2000	
27,	5	100	3000	
28,	6	96	6100	Œdema diminished.
29,	6	100	6·00	
30,	7	104	5000	
31,	7	100	4050	
April 1,	7	94	7550	
2,	7	100	4300	Œdema almost gone.
3,	7	102	4950	
4,	7	100	2500	No traces of œdema.
5,	7	100	2700	
6,	7	100	2500	

This case demonstrates the powerful action of the diuretin. On March 26, the day on which the treatment was instituted, the quantity of urine was about 2 quarts in the 24 hours; the administration of diuretin brought it up to more than 6 quarts a day. The pulse was not modified in frequency, but it became regular and stronger. The pains complained of by the patient, the malaise, oppression, and very marked dyspnœa became less in proportion to the augmentation of the urinary secretion.

CASE II.—Van H., aged 53. Arterio-sclerosis. Aortic insufficiency. Hypertrophy of the heart with dilatation. Bronchitis. Notable œdema of the inferior members.

DATE.	DIURETIN. GRAMMES.	PULSE.	URINE. CCM.	
March 28,	0	60	2400	
29,	5	—	2500	Œdema diminished.
30,	5	—	3500	
31,	5	74	3500	
April 1,	5	—	4000	
2,	6	80	3300	Still some traces of œdema.
3,	6	—	4300	
4,	7	—	3500	No more œdema.
5,	7	—	3000	General condition good.
6,	7	—	3000	

In this patient, doses of five grammes (75 grs.) a day were sufficient, after some days, to cause the disappearance of the compensatory troubles by keeping up the activity of the diuresis.

CASE III.—John S., aged 44. Aortic Insufficiency. Considerable hypertrophy with dilatation of the heart. Pulmonary hypertrophy with dilatation of the heart. Considerable œdema of the inferior members and the scrotum.

DATE.	DIURETIN. GRAMMES.	PULSE.	URINE. CCM.	
April 1,	5	88	500	
2,	5	84	1900	
4,	7	86	1700	Diminution of the œdema.
4,	7	74	3400	
5,	7	80	3500	Still some trace of œdema.
6,	8	82	4000	
7,	0	100	4300	
8,	Tr. stroph'thus (1-20) 30 gtt.	100	3300	
9,	Strophanthus 30 gtt.	108	900	
10,	id.	96	700	The œdema reappears.
11,	(Diuretin 8 grammes.)	92	2100	
12,	6	94	3200	
13,	8	100	3000	
14,	6	96	3600	Œdema diminished.
15,	8	100	4500	S. g. urine 1029.
16,	8	96	3100	
17,	6	96	2600	No more œdema.
18,	8	100	3200	
19,	0	100	3000	

The diuretin here shows itself to be superior to strophanthus; during the administration of the latter, the œdema which had almost entirely disappeared, and with it all the painful symptoms, reappeared rapidly, at the same time the diuresis fell to 900 and to 700 grammes.

In this same patient the diuretin proved itself equally superior to digitalis in a new trouble of compensation in the cardiac lesion.

DATE.	DIGITALIS IN POWDER. GRAMMES.	PULSE.	URINE. CCM.	
May 12,	0.50	104	800	Considerable œdema in the legs.
13,	0.50	88	1000	S. g. urine 1028.
14,	0.50	68	800	
15,	0	72	1500	No appreciable modification of œdema.
16,	0	84	1300	
17,	0	104	1000	
18,	Diuretin 6 grammes.	100	900	
19,	7	100	1300	
20,	8	88	2300	Œdema diminished.
21,	8	92	1300	
22,	8	84	3800	
23,	8	100	2000	
24,	8	100	3200	No more traces of œdema.
25,	8	100	3500	

The pulse was not influeneed in its frequency; but the diuretic effect was certainly pronounced.

Conclusions.—Diuretin is an energetic diuretic; it augments not alone the quantity of water eliminated, but it increases also the solid constituents of the urine.

The diuretic effects are ordinarily manifested at the end of 24 hours, and continue under the influence of the same doses. The diuresis becomes less active after the disappearance of the œdema.

Diuretin gives the best results in general dropsy due to insufficient cardiac action. It frequently produces considerable effect where digitalis and other diuretics fail. The unsuccessful cases may be due to individual peculiarity or to some alteration in the kidneys.—*Bul de l'Académie Royale de Médecine de Belgique*, No. 10, 1891.

METHODS OF USE.

Diuretin, which is readily soluble in warm water, is best given in the form of mixture, either simply in aqueous solution (5-100) or with the addition of correctives. Addition of acid or acid-vegetable juices should be strictly avoided. The drug should not be exposed to the air.

FORMULÆ.

℞ Diuretin Knoll.....75-105 grains.
Aq. distill.....4 fl. ounces.
M. D. S.—To be given throughout the day in tablespoonfuls.

℞ Diuretin-Knoll.....75-105 grains.
Aq. destill .....3ounces.
Aq. Menth. pip.....3 ouuces.
M. D. S.—To be given throughout the day in tablespoonfuls.

On account of the increased demand, we are able to reduce the price the DIURETIN-KNOLL more than 25 per cent., which is important, as the necessary doses are large.

McKesson & Robbins' Gelatin-Coated Pills of Diuretic-Knoll, 5 Grains.

CAUTION.—As there are imitations in the market, physicians should see that the genuine is supplied. It is put up only in original vials of one ounce, and in McK. & R. 5-grain pills In bottles of 100 and 500 each, and is plainly labeled DIURETIN-KNOLL.

Full notes on the use of DIURETIN-KNOLL sent FREE on request by

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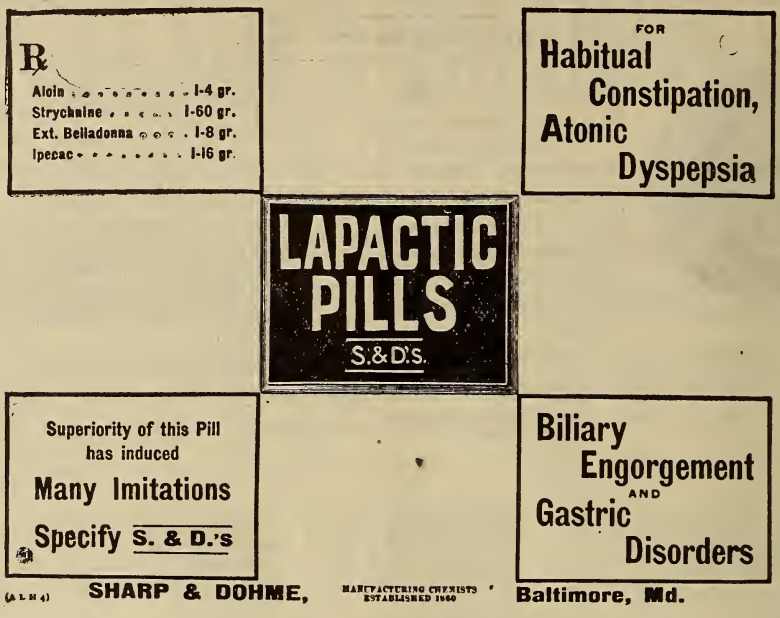
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Strychnine . . . . . 1-60 gr.
Ext. Belladonna . . . . 1-8 gr.
Ipecac . . . . . 1-16 gr.
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Habitual Constipation, Atonic Dyspepsia
LAPACTIC PILLS
S.&D.'S.
Superiority of this Pill has induced
Many Imitations
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Since we first called attention to our Lapactic Pills, some four years ago—publishing the composition of the same—a number of manufacturers have adopted the formula and have furnished these pills under the same name. Should Physicians fail to obtain satisfactory results from Lapactic Pills not of our make (and we have received a large number of such complaints from physicians by letter), we shall be glad to furnish a sample of our Lapactic Pills on application. We feel confident that they will fully substantiate our claims.

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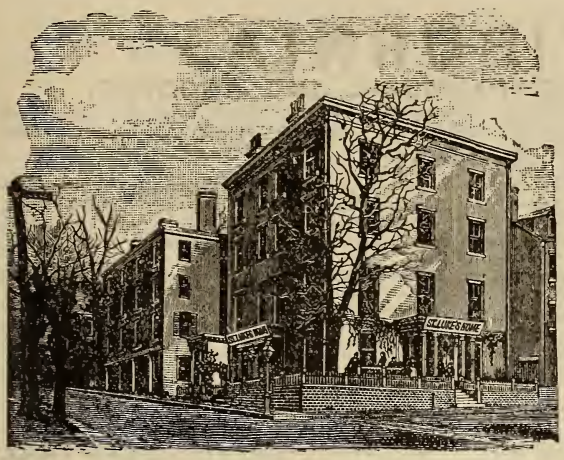

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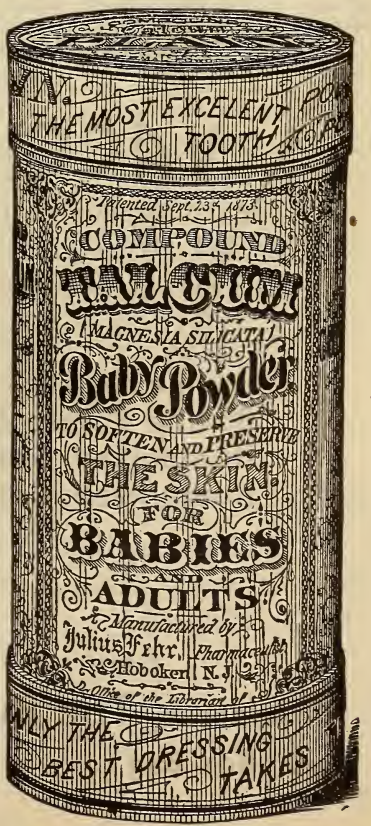

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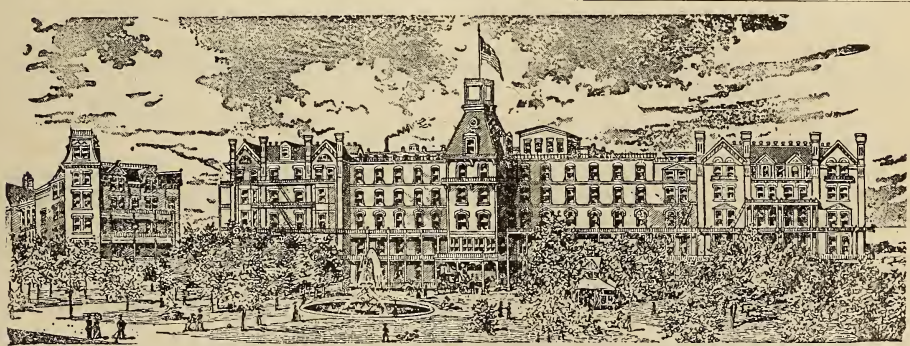

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CARDIAC AND RENAL AFFECTIONS TREATED BY DIURETIN-KNOLL.

BY PROFESSOR MASIUS.

Dr. B. W. Richardson.

CASE I.—N. S., æt. 53. Arterio-sclerosis; aortic insufficiency. Excentric hypertrophy of the heart. Bronchitis. Pulmonary hypostasis. Œdema of the inferior members reaching to the hips.

DATE.	DIURETIN. GRAMMES.	PULSE.	URINE. CCM.	
March 26,	0	100	2000	
27,	5	100	3000	
28,	6	96	6100	Œdema diminished.
29,	6	100	6000	
30,	7	104	5000	
31,	7	100	4050	
April 1,	7	94	5550	
2,	7	100	4300	Œdema almost gone.
3,	7	102	4950	
4,	7	100	2500	No traces of œdema.
5,	7	100	2700	
6,	7	100	2500	

This case demonstrates the powerful action of the diuretin. On March 26, the day on which the treatment was instituted, the quantity of urine was about 2 quarts in the 24 hours; the administration of diuretin brought it up to more than 6 quarts a day. The pulse was not modified in frequency, but it became regular and stronger. The pains complained of by the patient, the malaise, oppression, and very marked dyspnœa became less in proportion to the augmentation of the urinary secretion.

CASE II.—Van H., aged 53. Arterio-sclerosis. Aortic insufficiency. Hypertrophy of the heart with dilatation. Bronchitis. Notable œdema of the inferior members.

DATE.	DIURETIN. GRAMMES.	PULSE.	URINE. CCM.	
March 28,	0	60	2400	
29,	5	—	2500	Œdema diminished.
30,	5	—	3500	
31,	5	74	3500	
April 1,	5	—	4000	
2,	6	80	3300	Still some traces of œdema.
3,	6	—	4300	
4,	7	—	3500	No more œdema.
5,	7	—	3000	General condition good.
6,	7	—	3000	

In this patient, doses of five grammes (75 grs.) a day were sufficient, after some days, to cause the disappearance of the compensatory troubles by keeping up the activity of the diuresis.

CASE III.—John S., aged 44. Aortic Insufficiency. Considerable hypertrophy with dilatation of the heart. Pulmonary hypertrophy with dilatation of the heart. Considerable œdema of the inferior members and the scrotum.

DATE.	DIURETIN. GRAMMES.	PULSE.	URINE. CCM.	
April 1,	5	88	500	
2,	5	84	1900	
4,	7	86	1700	Diminution of the œdema.
4,	7	74	3400	
5,	7	80	3500	Still some trace of œdema.
6,	8	82	4000	
7,	0	100	4300	
8,	Tr. stroph'thus (1-20) 30 gtt.	100	3300	
9,	Strophanthus 30 gtt.	108	900	
10,	id.	96	700	The œdema reappears.
11,	(Diuretin 8 grammes.)	92	2100	
12,	6	94	3200	
13,	8	100	3000	
14,	6	96	3600	Œdema diminished.
15,	8	100	4500	S. g. urine 1029.
16,	8	96	3100	
17,	6	96	2600	No more œdema.
18,	8	100	3200	
19,	0	100	3000	

The diuretin here shows itself to be superior to strophanthus; during the administration of the latter, the œdema which had almost entirely disappeared, and with it all the painful symptoms, reappeared rapidly, at the same time the diuresis fell to 900 and to 700 grammes.

In this same patient the diuretin proved itself equally superior to digitalis in a new trouble of compensation in the cardiac lesion.

DATE.	DIGITALIS IN POWDER. GRAMMES.	PULSE.	URINE. CCM.	
May 12,	0.50	104	800	Considerable œdema in the legs.
13,	0.50	88	1000	S. g. urine 1028.
14,	0.50	68	800	
15,	0	72	1500	No appreciable modification of œdema.
16,	0	84	1300	
17,	0	104	1000	
18,	Diuretin 6 grammes.	100	900	
19,	7	100	1300	
20,	8	88	2300	Œdema diminished.
21,	8	92	1300	
22,	8	84	3800	
23,	8	100	2000	
24,	8	100	3200	No more traces of œdema.
25,	8	100	3500	

The pulse was not influeneed in its frequency; but the diuretic effect was certainly pronounced.

Conclusions.—Diuretin is an energetic diuretic; it augments not alone the quantity of water eliminated, but it increases also the solid constituents of the urine.

The diuretic effects are ordinarily manifested at the end of 24 hours, and continue under the influence of the same doses. The diuresis becomes less active after the disappearance of the œdema.

Diuretin gives the best results in general dropsy due to insufficient cardiac action. It frequently produces considerable effect where digitalis and other diuretics fail. The unsuccessful cases may be due to individual peculiarity or to some alteration in the kidneys.—*Bul de l'Académie Royale de Médecine de Belgique*, No. 10, 1891.

METHODS OF USE.

Diuretin, which is readily soluble in warm water, is best given in the form of mixture, either simply in aqueous solution (5-100) or with the addition of correctives. Addition of acid or acid-vegetable juices should be strictly avoided. The drug should not be exposed to the air.

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℞ Diuretin Knoll.....75-105 grains.
Aq. distill.....4 fl. ounces.
M. D. S.—To be given throughout the day in tablespoonfuls.

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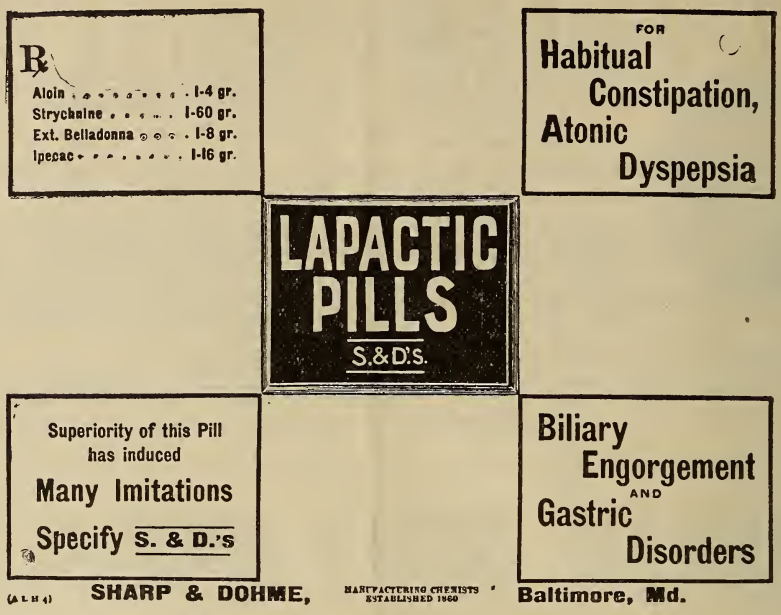
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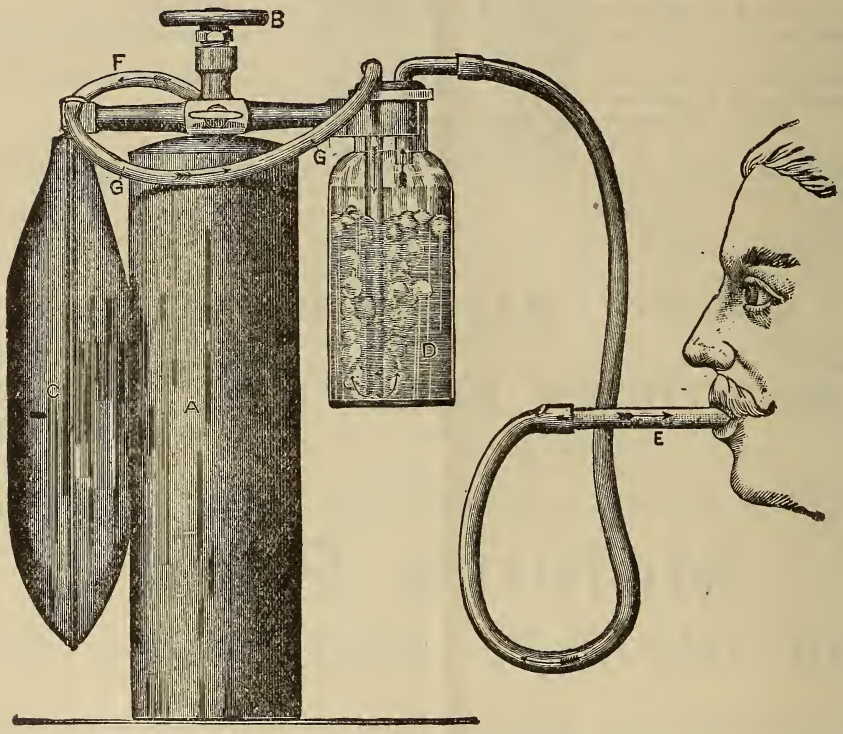

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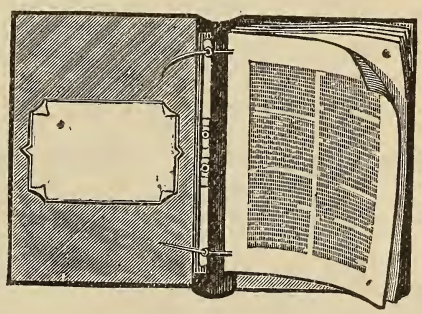

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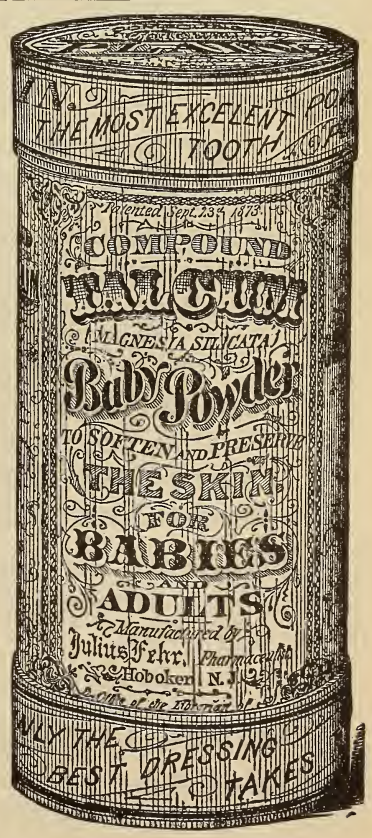

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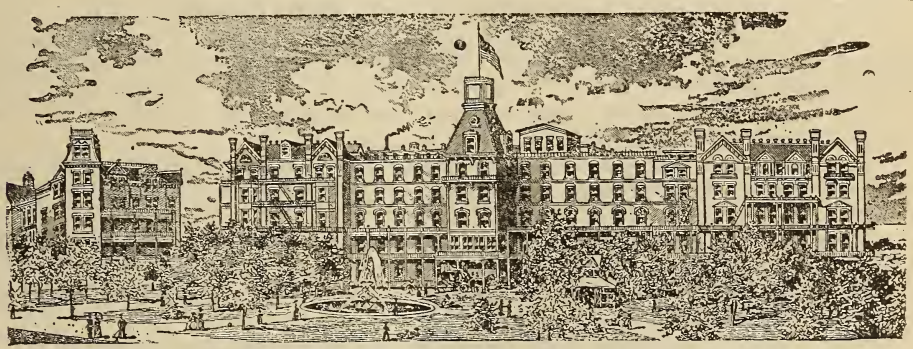

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CARDIAC AND RENAL AFFECTIONS TREATED BY DIURETIN-KNOLL.

BY PROFESSOR MASIUS.

Sir William Gull.

CASE I.—N. S., æt. 53. Arterio-sclerosis; aortic insufficiency. Eccentric hypertrophy of the heart. Bronchitis. Pulmonary hypostasis. Œdema of the inferior members reaching to the hips.

DATE.	DIURETIN. GRAMMES.	PULSE.	URINE. CCM.	
March 26,	0	100	2000	
27,	5	100	3000	
28,	6	96	6100	Œdema diminished.
29,	6	100	6:00	
30,	7	104	5000	
31,	7	100	4050	
April 1,	7	94	7550	
2,	7	100	4300	Œdema almost gone.
3,	7	102	4950	
4,	7	100	2500	No traces of œdema.
5,	7	100	2700	
6,	7	100	2500	

This case demonstrates the powerful action of the diuretin. On March 26, the day on which the treatment was instituted, the quantity of urine was about 2 quarts in the 24 hours; the administration of diuretin brought it up to more than 6 quarts a day. The pulse was not modified in frequency, but it became regular and stronger. The pains complained of by the patient, the malaise, oppression, and very marked dyspnœa became less in proportion to the augmentation of the urinary secretion.

CASE II.—Van H., aged 53. Arterio-sclerosis. Aortic insufficiency. Hypertrophy of the heart with dilatation. Bronchitis. Notable œdema of the inferior members.

DATE.	DIURETIN. GRAMMES.	PULSE.	URINE. CCM.	
March 28,	0	60	2400	
29,	5	—	2500	Œdema diminished.
30,	5	—	3500	
31,	5	74	3500	
April 1,	5	—	4000	
2,	6	80	3300	Still some traces of œdema.
3,	6	—	4300	
4,	7	—	3500	No more œdema.
5,	7	—	3000	General condition good.
6,	7	—	3000	

In this patient, doses of five grammes (75 grs.) a day were sufficient, after some days, to cause the disappearance of the compensatory troubles by keeping up the activity of the diuresis.

CASE III.—John S., aged 44. Aortic insufficiency. Considerable hypertrophy with dilatation of the heart. Pulmonary hypertrophy with dilatation of the heart. Considerable œdema of the inferior members and the scrotum.

DATE.	DIURETIN. GRAMMES.	PULSE.	URINE. CCM.	
April 1,	5	88	500	
2,	5	84	1900	
4,	7	86	1700	Diminution of the œdema.
4,	7	74	3400	
5,	7	80	3500	Still some trace of œdema.
6,	8	82	4000	
7,	0	100	4300	
8,	Tr. stroph'thus (1-20) 30 gtt.	100	3300	
9,	Strophanthus 30 gtt.	108	900	
10,	id.	96	700	The œdema reappears.
11,	(Diuretin 8 grammes.)	92	2100	
12,	6	94	3200	
13,	8	100	3000	
14,	6	96	3600	Œdema diminished.
15,	8	100	4500	S. g. urine 1029.
16,	8	96	3100	
17,	6	96	2600	No more œdema.
18,	8	100	3200	
19,	0	100	3000	

The diuretin here shows itself to be superior to strophanthus; during the administration of the latter, the œdema which had almost entirely disappeared, and with it all the painful symptoms, reappeared rapidly, at the same time the diuresis fell to 900 and to 700 grammes.

In this same patient the diuretin proved itself equally superior to digitalis in a new trouble of compensation in the cardiac lesion.

DATE.	DIGITALIS IN POWDER. GRAMMES.	PULSE.	URINE. CCM.	
May 12,	0.50	104	800	Considerable œdema in the legs.
13,	0.50	88	1000	S. g. urine 1028.
14,	0.50	68	800	
15,	0	72	1500	No appreciable modification of œdema.
16,	0	84	1300	
17,	0	104	1000	
18,	Diuretin 6 grammes.	100	900	
19,	7	100	1300	
20,	8	88	2300	Œdema diminished.
21,	8	92	1300	
22,	8	84	3800	
23,	8	100	2000	
24,	8	100	3200	No more traces of œdema.
25,	8	100	3500	

The pulse was not influenced in its frequency; but the diuretic effect was certainly pronounced.

Conclusions.—Diuretin is an energetic diuretic; it augments not alone the quantity of water eliminated, but it increases also the solid constituents of the urine.

The diuretic effects are ordinarily manifested at the end of 24 hours, and continue under the influence of the same doses. The diuresis becomes less active after the disappearance of the œdema.

Diuretin gives the best results in general dropsy due to insufficient cardiac action. It frequently produces considerable effect where digitalis and other diuretics fail. The unsuccessful cases may be due to individual peculiarity or to some alteration in the kidneys.—*Bul de l'Académie Royale de Médecine de Belgique*, No. 10, 1891.

METHODS OF USE.

Diuretin, which is readily soluble in warm water, is best given in the form of mixture, either simply in aqueous solution (5-100) or with the addition of correctives. Addition of acid or acid-vegetable juices should be strictly avoided. The drug should not be exposed to the air.

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Aq. distill.....4 fl. ounces.

M. D. S.—To be given throughout the day in tablespoonfuls.

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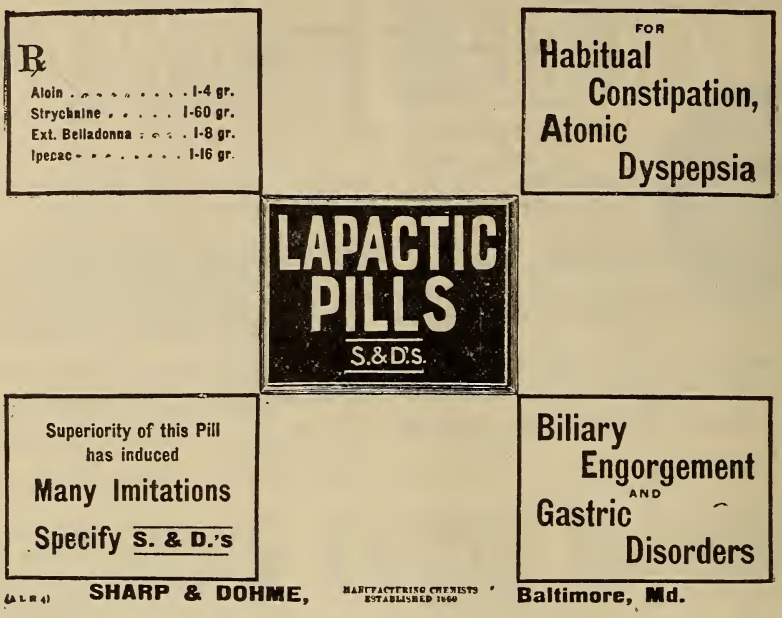
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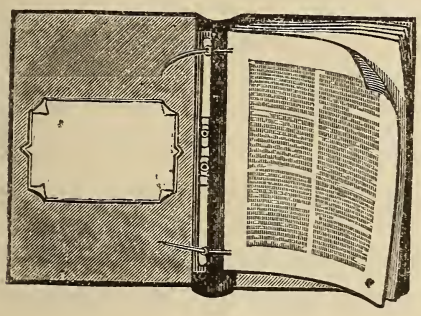

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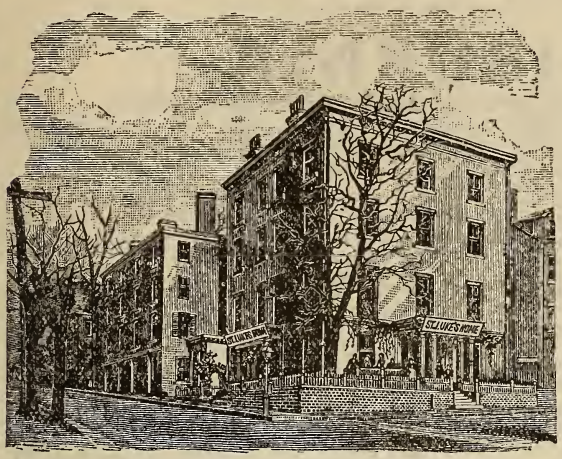

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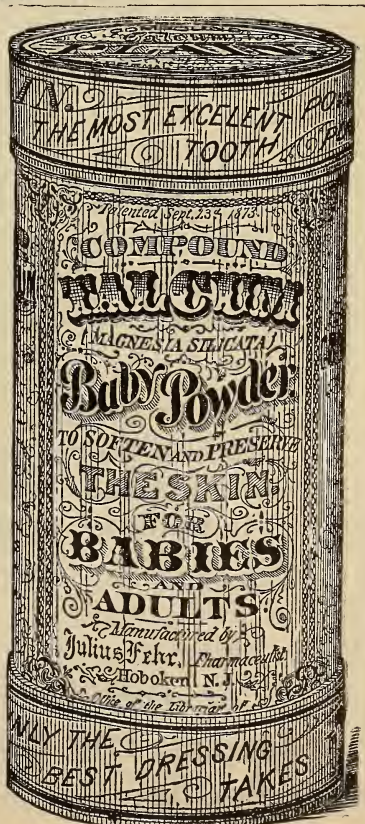

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In consequence of these facts we notice a preponderance of those diseases usually attributed to that indefinite cause—impure blood.

Hence we observe the tendency to scrofulous manifestations—eruptions, glandular swellings, abscesses and ulcerations; also the tendency to a breaking down of the nervous system, with its varied phenomena; the tendency, again, to a lack of prompt response to treatment in acute diseases and slow convalescence from them; and finally, the tendency on the part of inflammatory conditions of the air passages at this time, unless specially guarded, to become chronic or to develop active degenerative and destructive processes.

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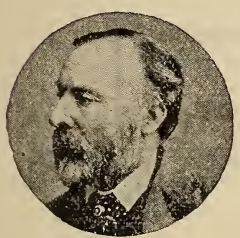

Sir Andrew Clark.

Last July, M. LABORDE reported to the *Société de Biologie*, July 4, 1891, that he had found, contrary to the general opinion, that the salts of strontium might be safely employed, were beneficial to the animal economy and that weight was increased under their use.

Some time after this report, July 28, MM. G. SÉE and CONSTANTIN PAUL stated before the *Académie de Médecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

Oct. 28, M. DUJARDIN-BEAUMETZ, before the *Société de Thérapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

Nov. 11, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society and stated that they had still further used the lactate and bromide salts and found them perfectly tolerated even in high doses.

M. FÉRÉ found the bromide of strontium of efficacy in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

All the authors insist on the necessity for a perfectly pure salt, one absolutely free from the presence of barium, such as those now offered to the medical profession, in the form of syrup and solution, by McKesson & Robbins.

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BY M. CONSTANTIN PAUL.

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In opposition to barium which is toxic and to potassium the toleration for which is limited, the salts of strontium are quite innocuous. Guinea pigs support without disturbance a dose of three grains, rabbits one of six grains, and dogs of 30 to 40 pounds support as high as 45 grains of the chloride given by intravenous injections. By the mouth the dose seems to be almost unlimited.

The author gives details of 12 cases, some of which were unsuccessfully treated but in none was there the slightest intolerance for strontium. He concludes as follows:

Strontium is not toxic; it is not a diuretic; it diminishes the albumen well and rapidly in epithelial and parenchymatous nephritis, but it does not suppress it entirely; if the administration of the drug is stopped too soon the albumin increases at once.

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The diminution of the albuminuria is followed by a very notable amelioration of the other symptoms and the patient, exhibits much improvement. The presence of fever, even intense, does not prevent the action o the lactate of strontia in parenchymatous nephritis.

I have had no personal experience in the use of the drug in maladies of the stomach, or of the bromide in epilepsy, but I administered the latter salt to a young woman the subject of hystero-epileptic attacks recurring at the menstrual period. These attacks had resisted the use of bromide of potassium in doses of 60 grains a day; the bromide of strontium given for two months in doses of 90 grains a day appears to have succeeded as she has not had any attacks during that time.—*Les Nouveaux Remèdies.*

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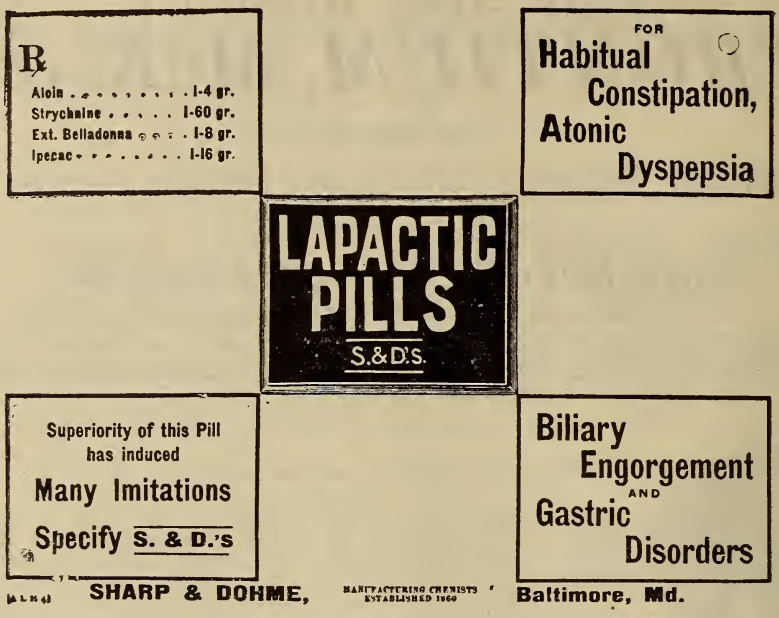
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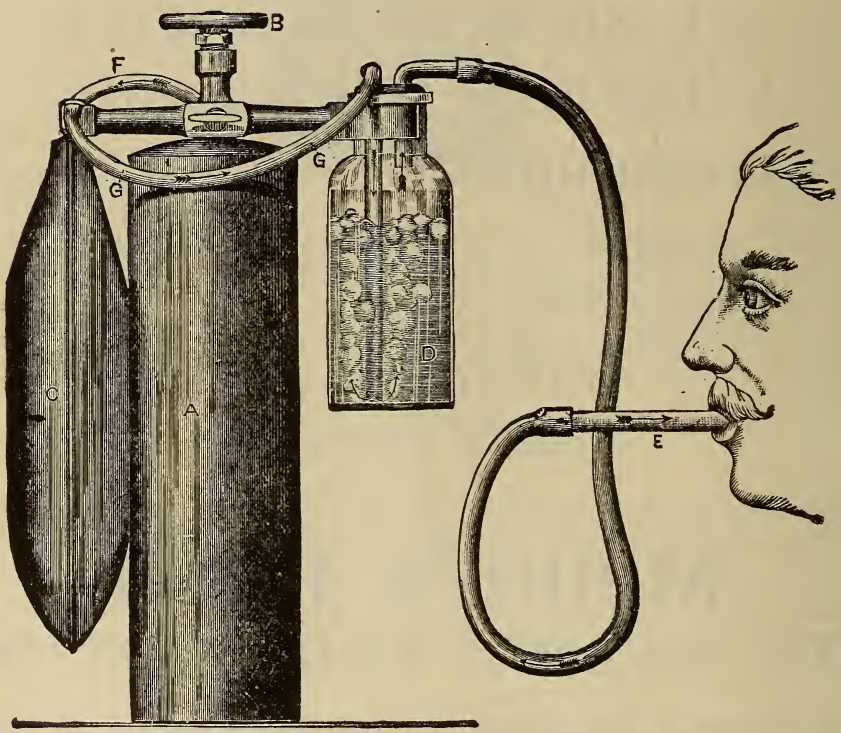

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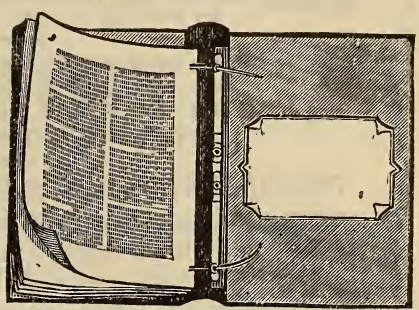

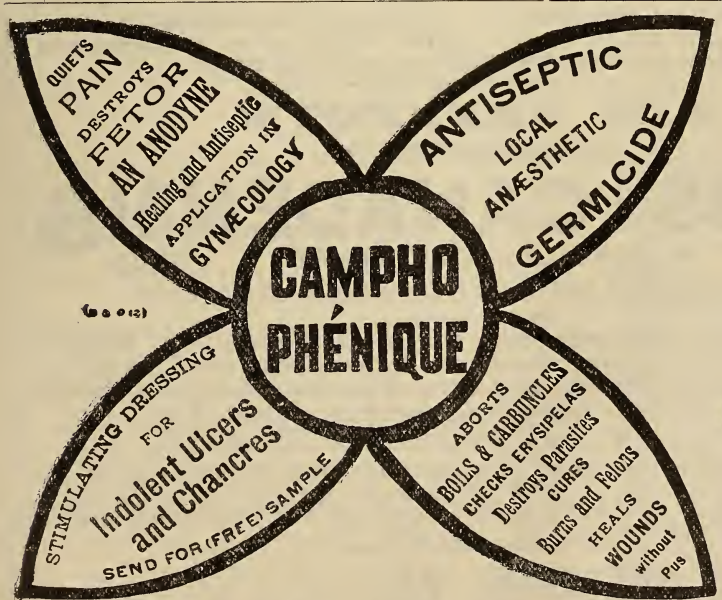

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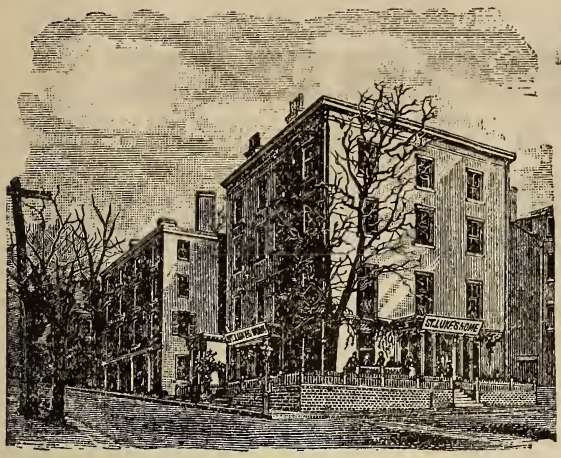

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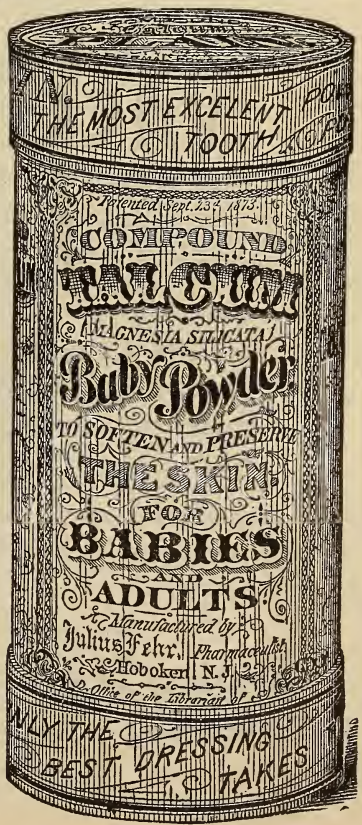

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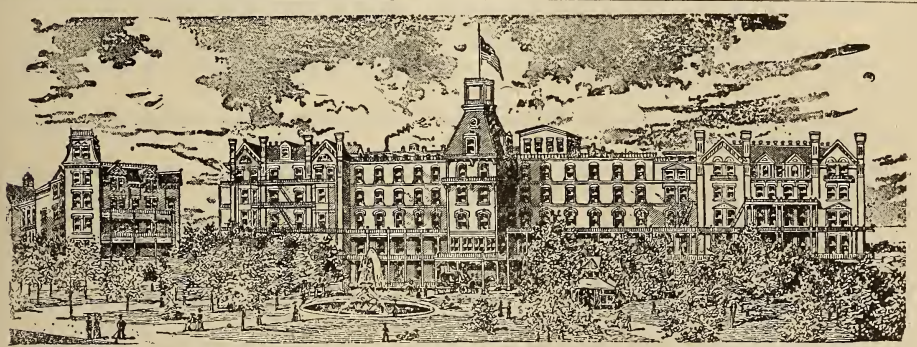

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Some time after this report, July 28, MM. G. SÉE and CONSTANTIN PAUL stated before the *Académie de Médecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

Oct. 28, M. DUJARDIN-BEAUMETZ, before the *Société de Thérapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

Nov. 11, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society and stated that they had still further used the lactate and bromide salts and found them perfectly tolerated even in high doses.

M. FÉRÉ found the bromide of strontium of efficacy in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

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The diminution of the albuminuria is followed by a very notable amelioration of the other symptoms and the patient, exhibits much improvement. The presence of fever, even intense, does not prevent the action o the lactate of strontia in parenchymatous nephritis.

I have had no personal experience in the use of the drug in maladies of the stomach, or of the bromide in epilepsy, but I administered the latter salt to a young woman the subject of hystero-epileptic attacks recurring at the menstrual period. These attacks had resisted the use of bromide of potassium in doses of 60 grains a day; the bromide of strontium given for two months in doses of 90 grains a day appears to have succeeded as she has not had any attacks during that time.—*Les Nouveaux Remèdies.*

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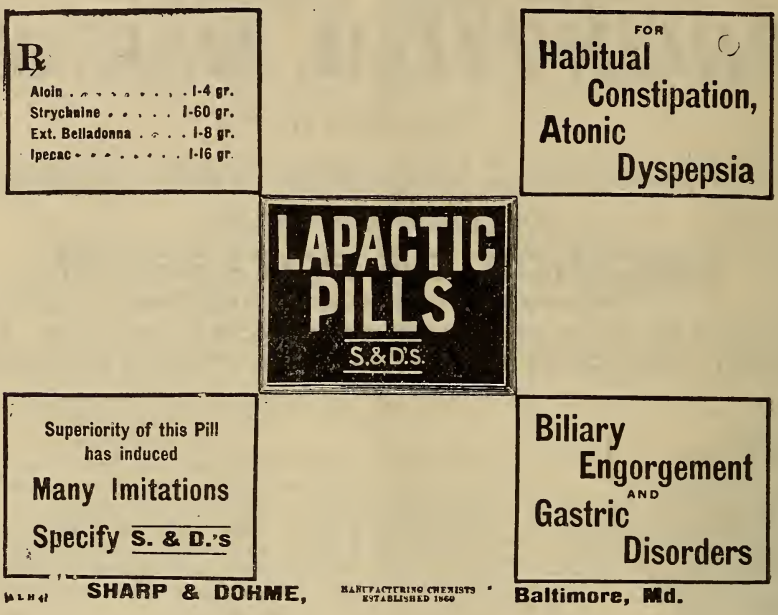
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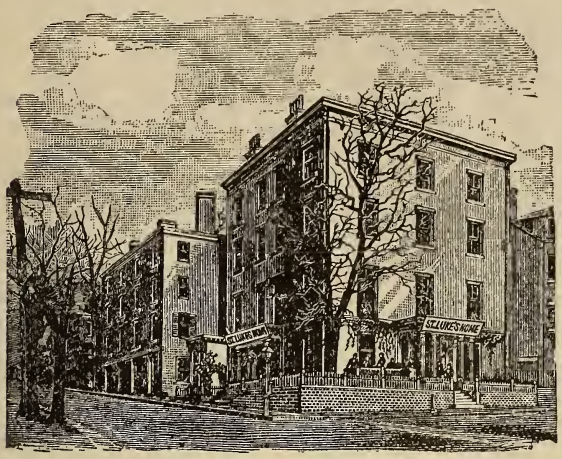

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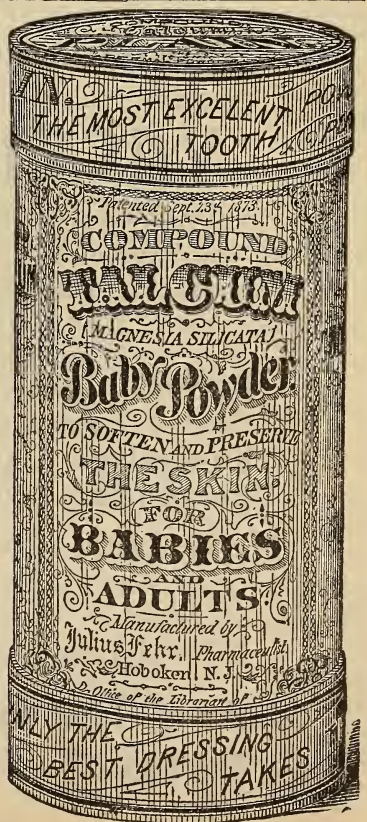

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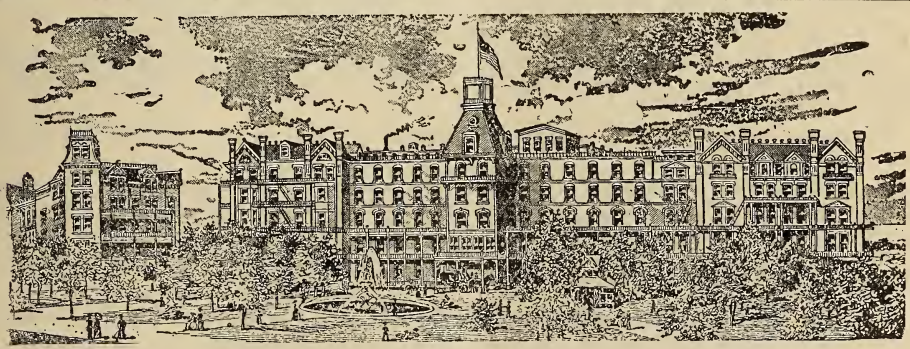

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Last July, M. LABORDE reported to the *Société de Biologie*, July 4, 1891, that he had found, contrary to the general opinion, that the salts of strontium might be safely employed, were beneficial to the animal economy and that weight was increased under their use.

Some time after this report, July 28, MM. G. SÉE and CONSTANTIN PAUL stated before the *Académie de Médecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

Oct. 28, M. DUJARDIN-BEAUMETZ, before the *Société de Thérapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

Nov. 11, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society and stated that they had still further used the lactate and bromide salts and found them perfectly tolerated even in high doses.

M. FÉRÉ found the bromide of strontium of efficacy in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

All the authors insist on the necessity for a perfectly pure salt, one absolutely free from the presence of barium, such as those now offered to the medical profession, in the form of syrup and solution, by McKesson & Robbins.

THE TREATMENT OF BRIGHT'S DISEASE BY STRONTIUM.

BY M. CONSTANTIN PAUL.

Since the beginning of June I have used outside about two pounds, and in the hospitals over four pounds of the lactate of strontium.

In opposition to barium which is toxic and to potassium the toleration for which is limited, the salts of strontium are quite innocuous. Guinea pigs support without disturbance a dose of three grains, rabbits one of six grains, and dogs of 30 to 40 pounds support as high as 45 grains of the chloride given by intravenous injections. By the mouth the dose seems to be almost unlimited.

The author gives details of 12 cases, some of which were unsuccessfully treated but in none was there the slightest intolerance for strontium. He concludes as follows:

Strontium is not toxic; it is not a diuretic; it diminishes the albumen well and rapidly in epithelial and parenchymatous nephritis, but it does not suppress it entirely; if the administration of the drug is stopped too soon the albumin increases at once.

This medicament may be called upon to render service in the albuminuria of: rheumatismal, scrofulous and gouty nephritis.

In the albuminuria of pregnancy and of those newly delivered.

There are other forms of albuminuria in which I have, as yet, had no experience with the drug.

The diminution of the albuminuria is followed by a very notable amelioration of the other symptoms and the patient, exhibits much improvement. The presence of fever, even intense, does not prevent the action o the lactate of strontia in parenchymatous nephritis.

I have had no personal experience in the use of the drug in maladies of the stomach, or of the bromide in epilepsy, but I administered the latter salt to a young woman the subject of hystero-epileptic attacks recurring at the menstrual period. These attacks had resisted the use of bromide of potassium in doses of 60 grains a day; the bromide of strontium given for two months in doses of 90 grains a day appears to have succeeded as she has not had any attacks during that time.—*Les Nouveaux Remèdes.*

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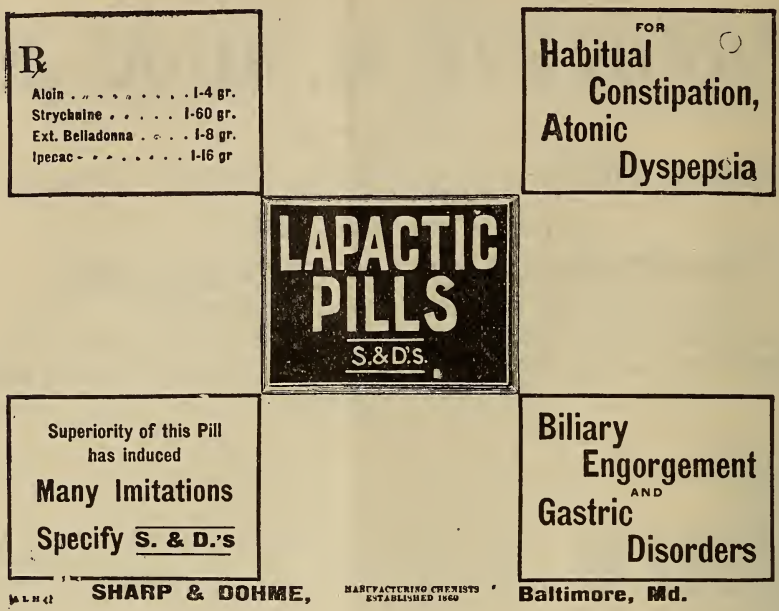
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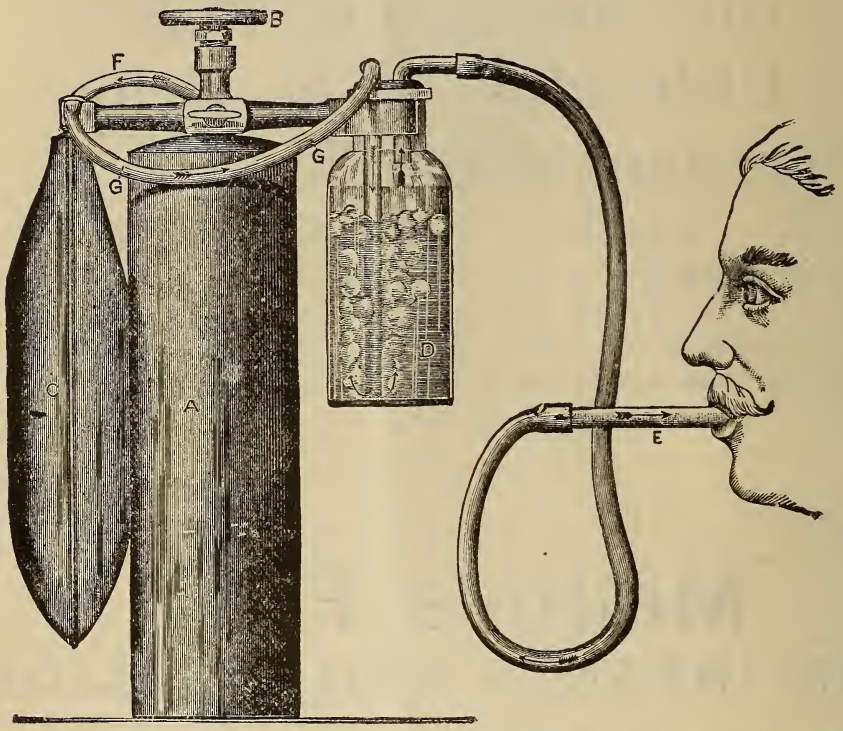

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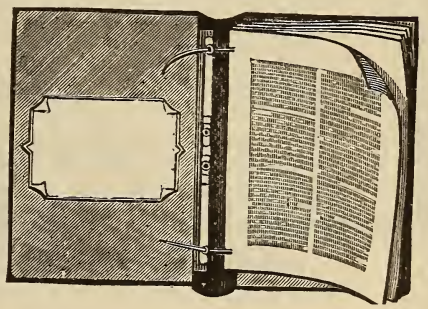

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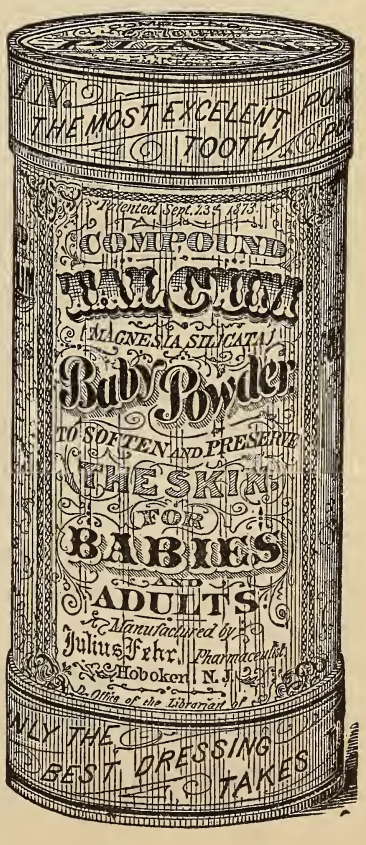

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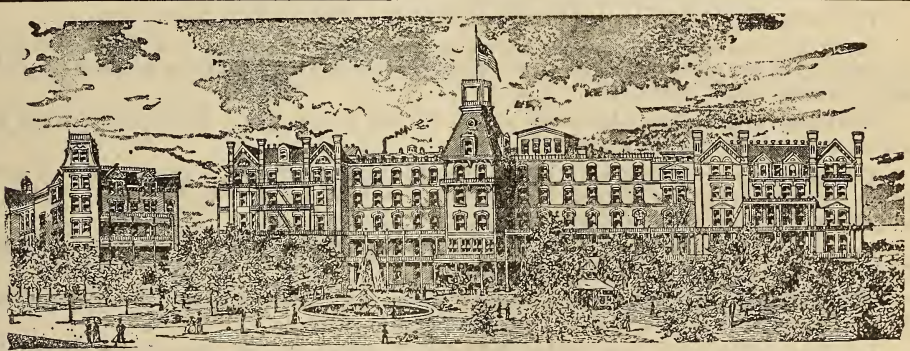

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CHIONIA stimulates the Liver and restores it to a healthy condition, without debilitating the system by Catharsis; does not purge, per se, but under its use the Liver and Bowels gradually resume their normal functions.

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THE NEW REMEDY

STRONTIUM, McK. & R.

Indicated in

Rheumatism, Epilepsy, Indigestion, Bright's Disease, Etc.,

And in the place of the

BROMIDE OF POTASSIUM,

Than which it is better tolerated even in high Doses.

THE LACTATE AND BROMIDE OF STRONTIUM McK. & R., IN SYRUP OR SOLUTION IN ORIGINAL POUND BOTTLES.

Prof. Virchow.

Last July, M. LABORDE reported to the *Société de Biologie*, July 4, 1891, that he had found, contrary to the general opinion, that the salts of strontium might be safely employed, were beneficial to the animal economy and that weight was increased under their use.

Some time after this report, July 28, MM. G. SÉE and CONSTANTIN PAUL stated before the *Académie de Médecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

Oct. 28, M. DUJARDIN-BEAUMETZ, before the *Société de Thérapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

Nov. 11, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society and stated that they had still further used the lactate and bromide salts and found them perfectly tolerated even in high doses.

M. FÉRÉ found the bromide of strontium of efficacy in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

All the authors insist on the necessity for a perfectly pure salt, one absolutely free from the presence of barium, such as those now offered to the medical profession, in the form of syrup and solution, by McKesson & Robbins.

THE TREATMENT OF BRIGHT'S DISEASE BY STRONTIUM.

BY M. CONSTANTIN PAUL.

Since the beginning of June I have used outside about two pounds, and in the hospitals over four pounds of the lactate of strontium.

In opposition to barium which is toxic and to potassium the toleration for which is limited, the salts of strontium are quite innocuous. Guinea pigs support without disturbance a dose of three grains, rabbits one of six grains, and dogs of 30 to 40 pounds support as high as 45 grains of the chloride given by intravenous injections. By the mouth the dose seems to be almost unlimited.

The author gives details of 12 cases, some of which were unsuccessfully treated but in none was there the slightest intolerance for strontium. He concludes as follows:

Strontium is not toxic; it is not a diuretic; it diminishes the albumen well and rapidly in epithelial and parenchymatous nephritis, but it does not suppress it entirely; if the administration of the drug is stopped too soon the albumin increases at once.

This medicament may be called upon to render service in the albuminuria of: rheumatismal, scrofulous and gouty nephritis.

In the albuminuria of pregnancy and of those newly delivered.

There are other forms of albuminuria in which I have, as yet, had no experience with the drug.

The diminution of the albuminuria is followed by a very notable amelioration of the other symptoms and the patient, exhibits much improvement. The presence of fever, even intense, does not prevent the action o the lactate of strontia in parenchymatous nephritis.

I have had no personal experience in the use of the drug in maladies of the stomach, or of the bromide in epilepsy, but I administered the latter salt to a young woman the subject of hystero-epileptic attacks recurring at the menstrual period. These attacks had resisted the use of bromide of potassium in doses of 60 grains a day; the bromide of strontium given for two months in doses of 90 grains a day appears to have succeeded as she has not had any attacks during that time.—*Les Nouveaux Remèdes.*

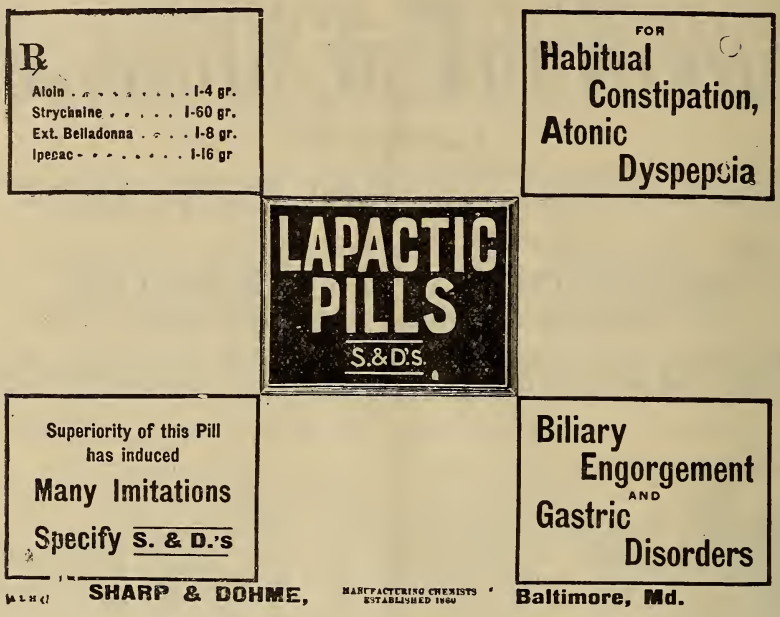
McK. & R. SYRUP LACTATE OF STRONTIUM, C. P.

McK. & R. SYRUP BROMIDE OF STRONTIUM, C. P.

Each fluid ounce contains 60 grains of the salt. DOSE: One or two teaspoonfuls four to eight times a day

Where sugar is an objection, McKesson & Robbins' solution of the above salts, of the same strength, may be prescribed.

McKESSON & ROBBINS, Manufacturing Chemists, New York.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We make and sell oxygen and nitrogen monoxide for therapeutic use, and we guarantee them pure They are put up in compact form. (A cylinder containing 100 gallons of nitrogen monoxide or 40 gallons of oxygen measures 12 inches in length, has a diameter of 3½ inches, and weighs 10½ lbs. A cylinder containing 450 gallons of nitrogen monoxide or 100 gallons of oxygen measures 25 inches in length, has a diameter of 4½ inches, and weighs 34 lbs.)

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For those who should, but cannot, go from home for rest or a change of air, or for those who, from any cause fail to get air enough into their lungs, the inhalation of one or other of these gases, or both in combination, promises great benefit. The testimony is that in cases of

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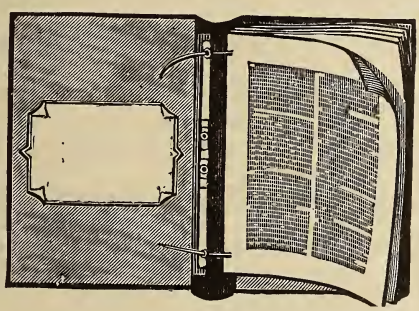

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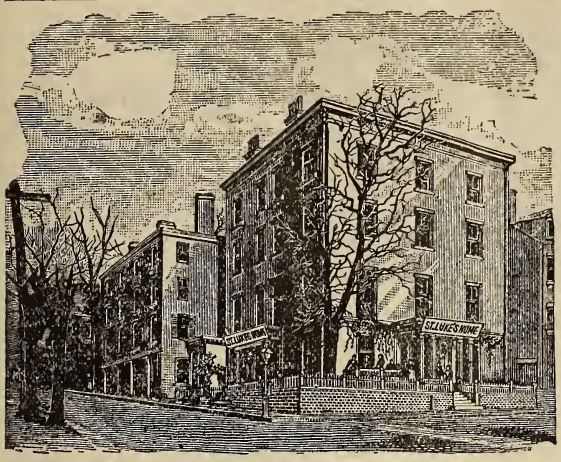

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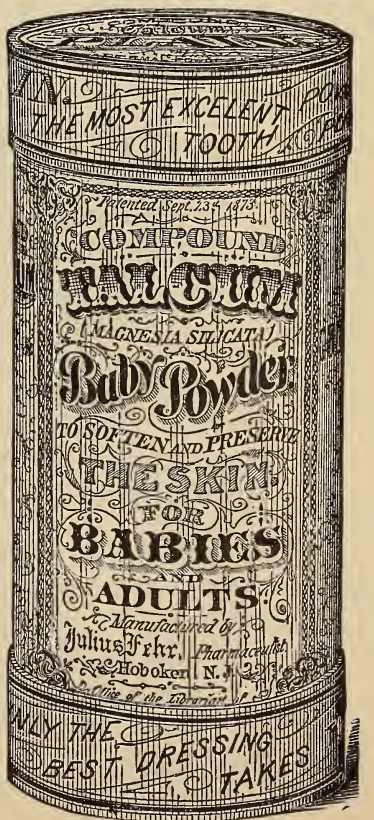

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DOSE.—For adults, a desertspoonful to a tablespoonful three times a day, after meals. In urgent cases, where there is much pain, dose may be given every hour or two, ALWAYS IN HOT WATER.

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Iodia is a combination of active principles obtained from the Green Roots of Stillingia, Helonias, Saxifraga, Menispermum, and Aromatics. Each fluid drachm also contains five grains Iod. Potas., and three grains Phos. Iron.

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One or two fluid drachms (more or less as indicated) three times a day before meals.

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Chloralamid-SCHERING is a superior hypnotic; an efficient and safe sleep-producing agent; its use is not attended by unpleasant and untoward side or after-effects, nor will continued use develop a habit or necessitate increasing doses. Eminent medical authorities have endorsed Chloralamid, and full clinical reports with chemical and therapeutical data will be furnished to physicians and pharmacists on request.

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Dr. Robert Koch.

Last July, M. LABORDE reported to the *Societe de Biologie*, July 4, 1891, that he had found, contrary to the general opinion, that the salts of strontium might be safely employed, were beneficial to the animal economy, and that weight was increased under their use.

Some time after this report, July 28th, MM. G. SEE and CONSTANTIN PAUL stated before the *Académie de Médecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively, and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

October 28th, M. DUJARDIN-BEAUMETZ, before the *Société de Thérapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

November 11th, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society, and stated that they had still further used the lactate and bromide salts, and found them perfectly tolerated even in high doses.

M. FERÉ found the bromide of strontium of efficacy in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

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Diuretin-Knoll in Infantile Practice.

BY DR. R. DEMME.

ACCORDING to the observations of Dr. R. Demme, Professor of Pædiatrics to the Faculty of Medicine of Berne, diuretin may be administered in the daily dose of ·50 to 1·50 grammes (7½ to 22 grains) to children of from two to five years old, and in daily doses of 22 to 45 grains in children of six to ten years. In infants less than a year old the drug is contra-indicated, as it easily provokes gastro-intestinal irritation in these young patients.

Care should be taken in prescribing diuretin, as it is liable to be decomposed by certain substances M. Demme recommends the following:

Diuretin	gr. xxij
Distilled water	ʒ iij
Brandy	gtt. x
Sugar	grs. xl

M. Sig. To be taken in the course of the twenty-four hours in doses of one tablespoonful.

Dr. Demme's observations have convinced him that diuretin is a good diuretic for children, exempt for the most part of all unpleasant influence, and probably acting on the renal epithelium.

Under the influence of diuretin, the dropsy of scarlatinal nephritis disappeared more quickly than by the action of any other medicament. It suppresses very rapidly the anasarca and serous effusions in cases of mitral disease, when the compensation has been previously established by means of digitalis.

The diuretin was generally well supported, and it had no cumulative action. However, in one case of generalized dropsy in a child of ten years, suffering from amyloid degeneration of the liver, spleen, and kidney, Dr. Demme has seen a morbilliform eruption with abundant diarrhœa, after the injection of 90 grains of diuretin in the space of four days.—*La Semaine Médicale*, Feb. 24, 1892.

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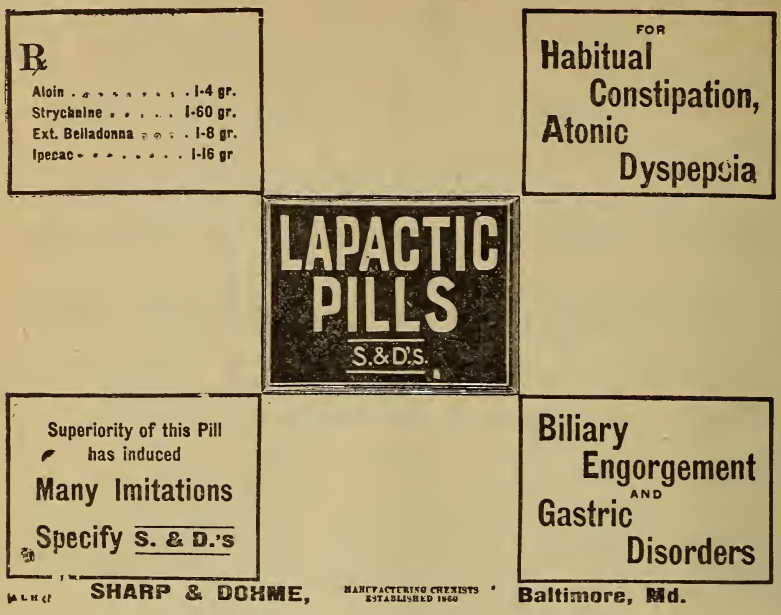
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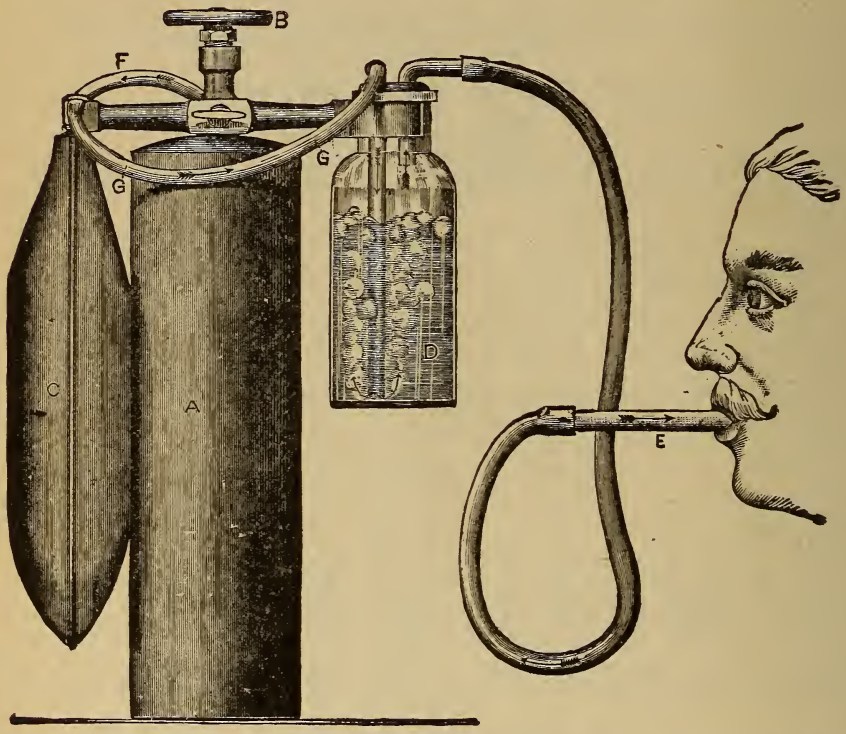

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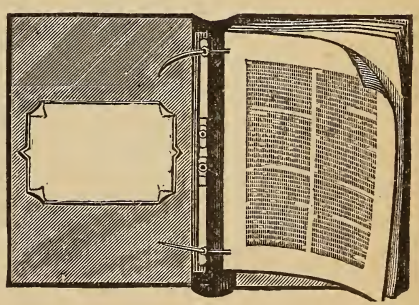

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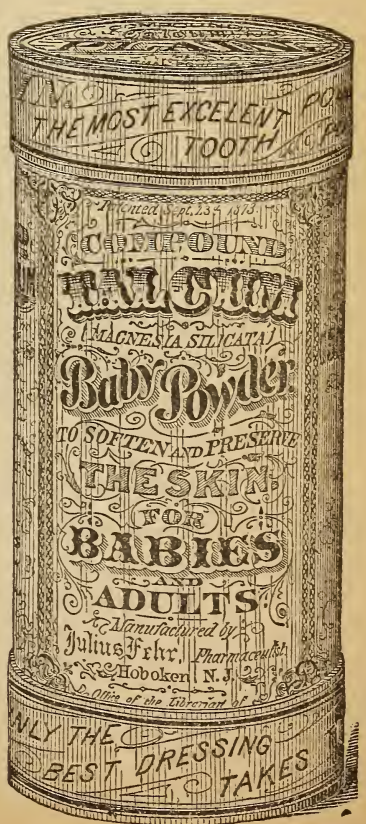

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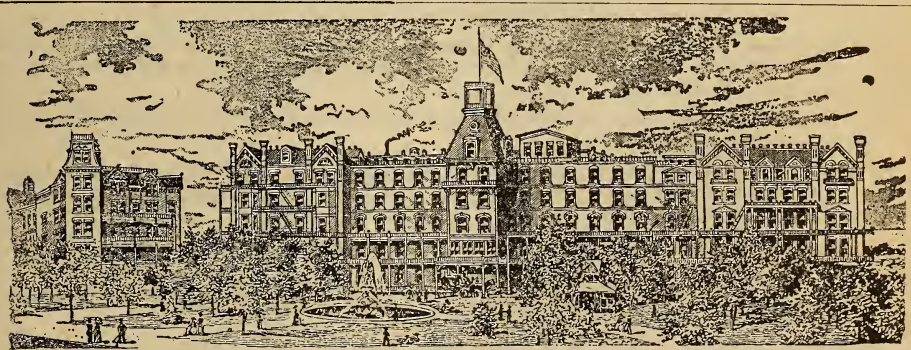

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Each tablespoonful contains one gramme (15 grains) of Chloralamid-Schering.

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THAN WHICH IT IS BETTER TOLERATED EVEN IN HIGH DOSES.

Charles Bell Taylor

Last July, M. LABORDE reported to the *Societe de Biologie*, July 4, 1891, that he had found, contrary to the general opinion, that the salts of strontium might be safely employed, were beneficial to the animal economy, and that weight was increased under their use.

Some time after this report, July 28th, MM. G. SEE and CONSTANTIN PAUL stated before the *Académie de Médecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively, and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

October 28th, M. DUJARDIN-BEAUMETZ, before the *Société de Thérapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

November 11th, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society, and stated that they had still further used the lactate and bromide salts, and found them perfectly tolerated even in high doses.

M. FERE found the bromide of strontium of efficacy in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

All the authors insist on the necessity for a perfectly pure salt, one absolutely free from the presence of barium, such as those now offered to the medical profession, in the form of syrup and solution by McKesson & Robbins.

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Diuretin-Knoll in Infantile Practice.

By DR. R. DEMME.

ACCORDING to the observations of Dr. R. Demme, Professor of Pædiatrics to the Faculty of Medicine of Berne, diuretin may be administered in the daily dose of ·50 to 1·50 grammes (7½ to 22 grains) to children of from two to five years old, and in daily doses of 22 to 45 grains in children of six to ten years. In infants less than a year old the drug is contra-indicated, as it easily provokes gastro-intestinal irritation in these young patients.

Care should be taken in prescribing diuretin, as it is liable to be decomposed by certain substances M. Demme recommends the following:

Diuretin	gr. xxij
Distilled water	ʒ iij
Brandy	gtt. x
Sugar	grs. xl

M. Sig. To be taken in the course of the twenty-four hours in doses of one tablespoonful.

Dr. Demme's observations have convinced him that diuretin is a good diuretic for children, exempt for the most part of all unpleasant influence, and probably acting on the renal epithelium.

Under the influence of diuretin, the dropsy of scarlatinal nephritis disappeared more quickly than by the action of any other medicament. It suppresses very rapidly the anasarca and serous effusions in cases of mitral disease, when the compensation has been previously established by means of digitalis.

The diuretin was generally well supported, and it had no cumulative action. However, in one case of generalized dropsy in a child of ten years, suffering from amyloid degeneration of the liver, spleen, and kidney, Dr. Demme has seen a morbilliform eruption with abundant diarrhœa, after the injection of 90 grains of diuretin in the space of four days.—*La Semaine Médicale*, Feb. 24, 1892.

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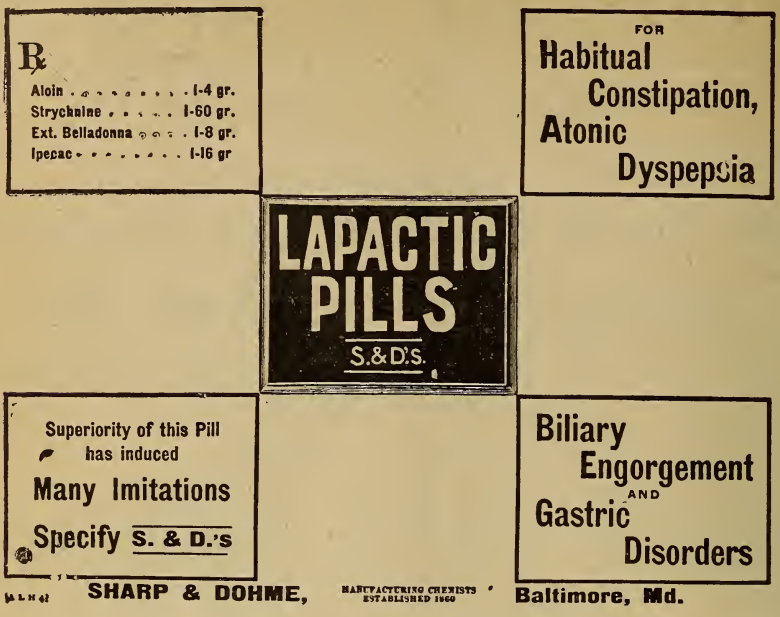
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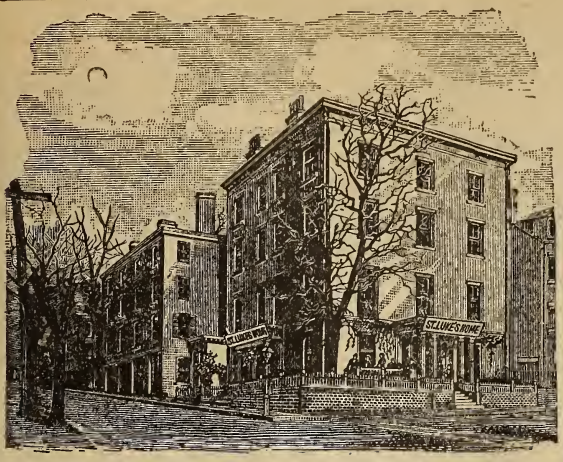

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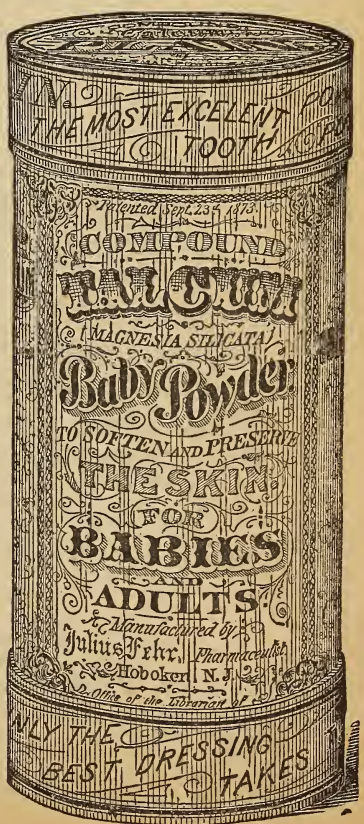

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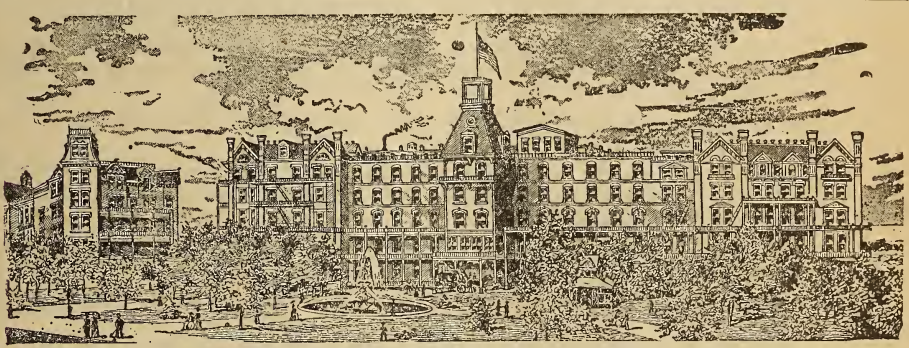

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Some time after this report, July 28th, MM. G. SEE and CONSTANTIN PAUL stated before the *Academie de Medecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively, and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

October 28th, M. DUJARDIN-BEAUMETZ, before the *Soci te de Therapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

November 11th, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society, and stated that they had still further used the lactate and bromide salts, and found them perfectly tolerated even in high doses.

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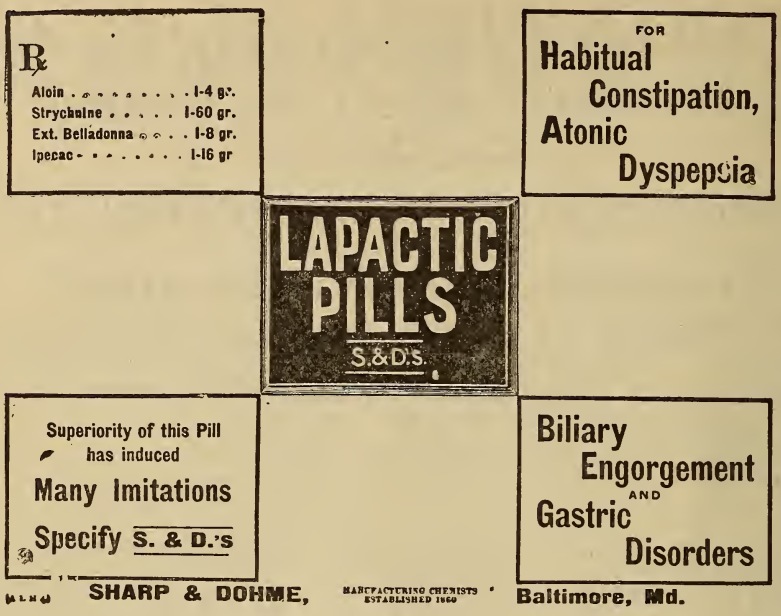
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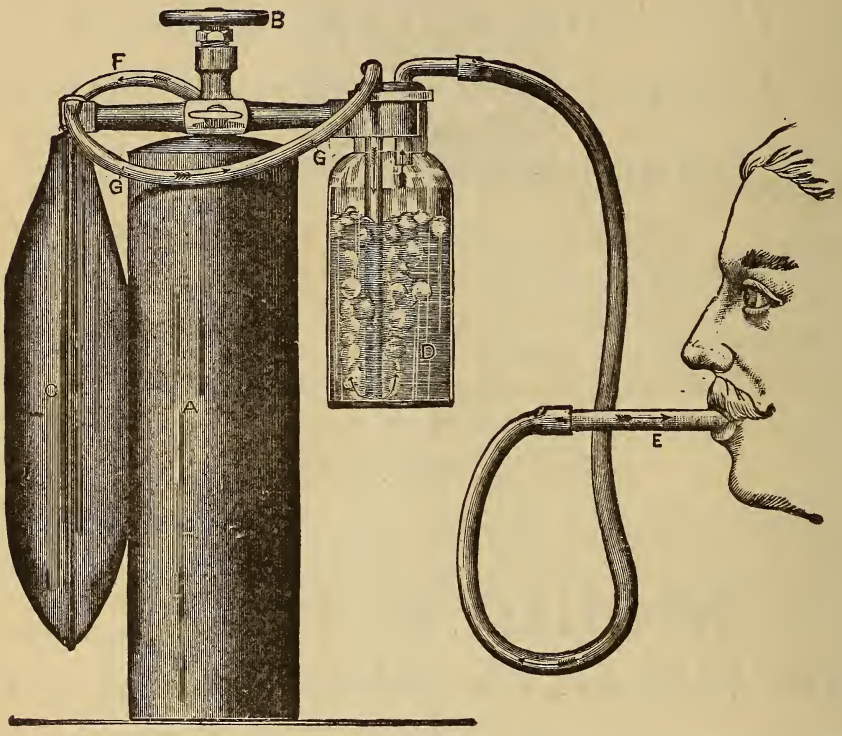

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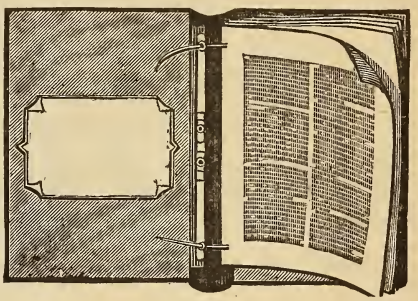

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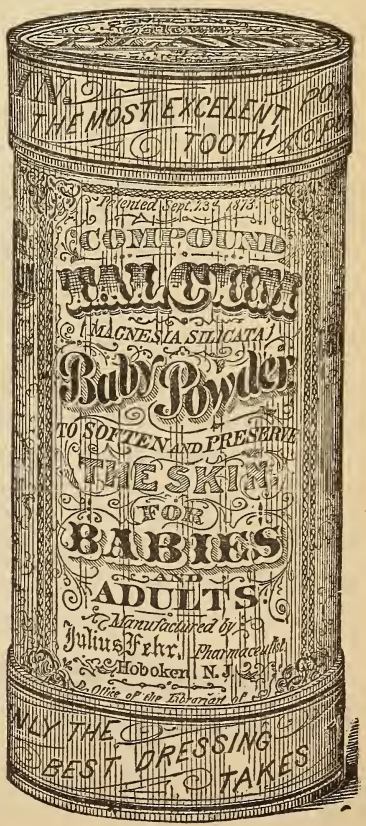

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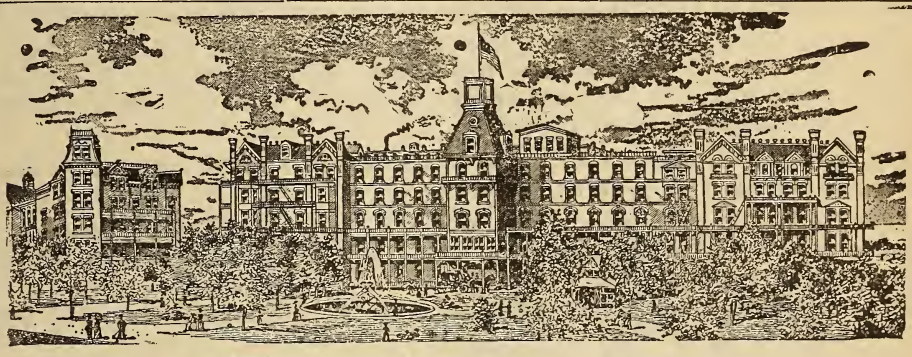

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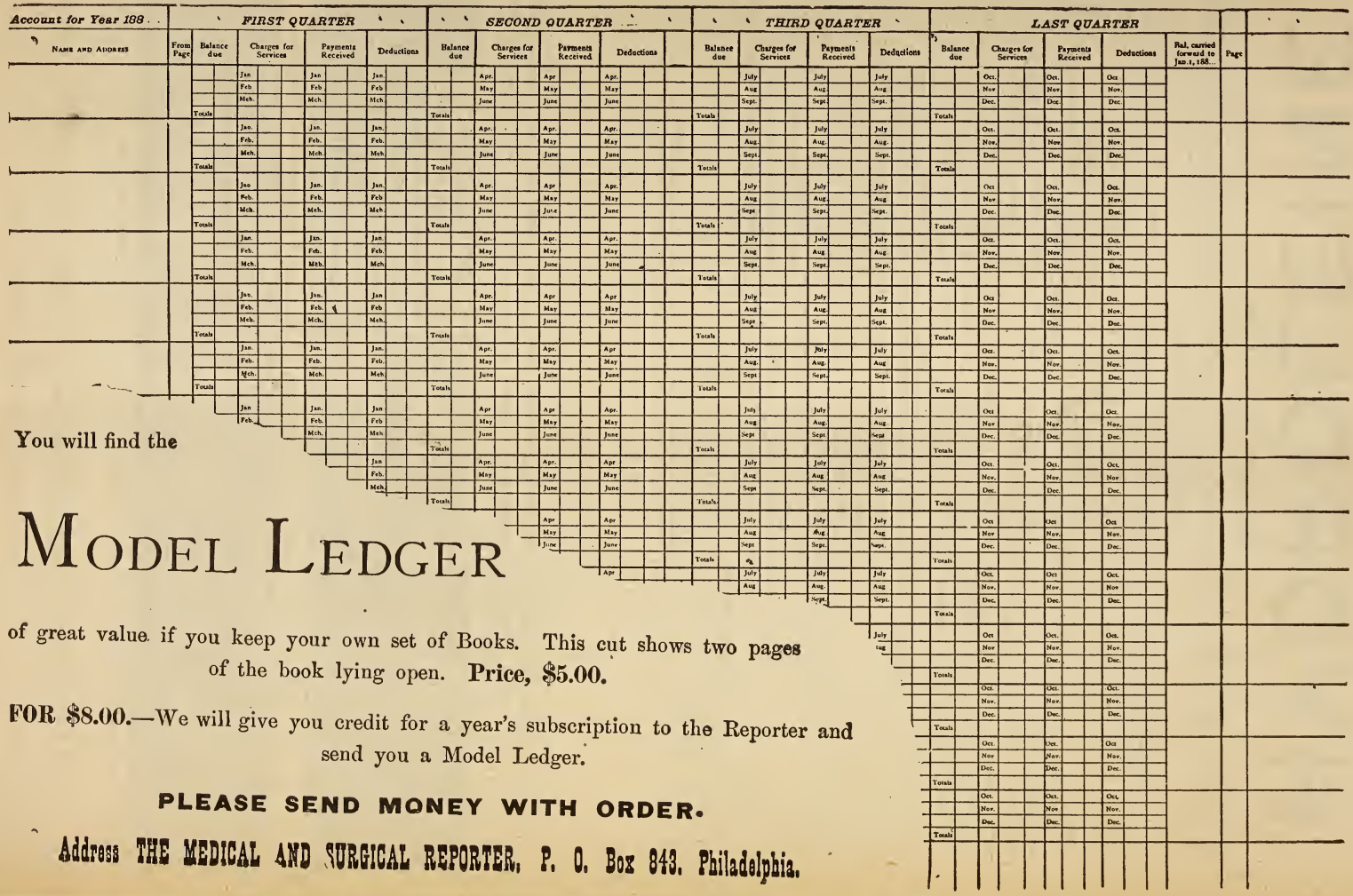

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Some time after this report, July 28th, MM. G. SEE and CONSTANTIN PAUL stated before the *Academie de Medecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively, and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

October 28th, M. DUJARDIN-BEAUMETZ, before the *Societe de Therapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

November 11th, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society, and stated that they had still further used the lactate and bromide salts, and found them perfectly tolerated even in high doses.

M. FERE found the bromide of strontium of efficacy in in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

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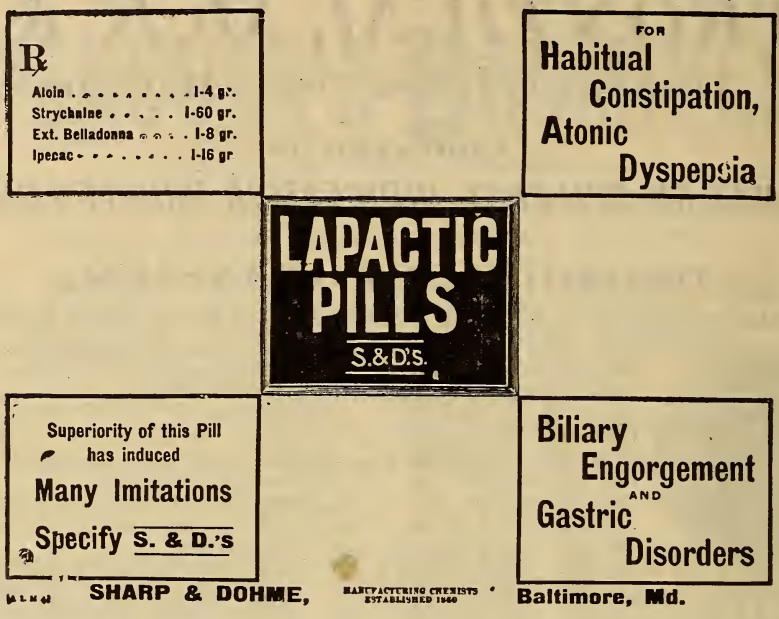
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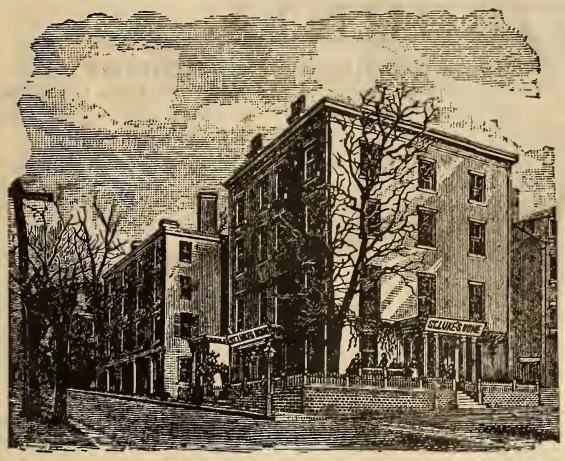

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Last July, M. LABORDE reported to *Societe de Biologie*, July 4, 1891, that he had found, contrary to the general opinion, that the salts of strontium might be safely employed, were beneficial to the animal economy, and that weight was increased under their use.

Some time after this report, July 28th, MM. G. SEE and CONSTANTIN PAUL stated before the *Academie de Medecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively, and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

October 28th, M. DUJARDIN-BEAUMETZ, before the *Societe de Therapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

November 11th, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society, and stated that they had still further used the lactate and bromide salts, and found them perfectly tolerated even in high doses.

M. FERE found the bromide of strontium of efficacy in in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

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Sugar	grs. xl

M. Sig. To be taken in the course of the twenty-four hours in doses of one tablespoonful.

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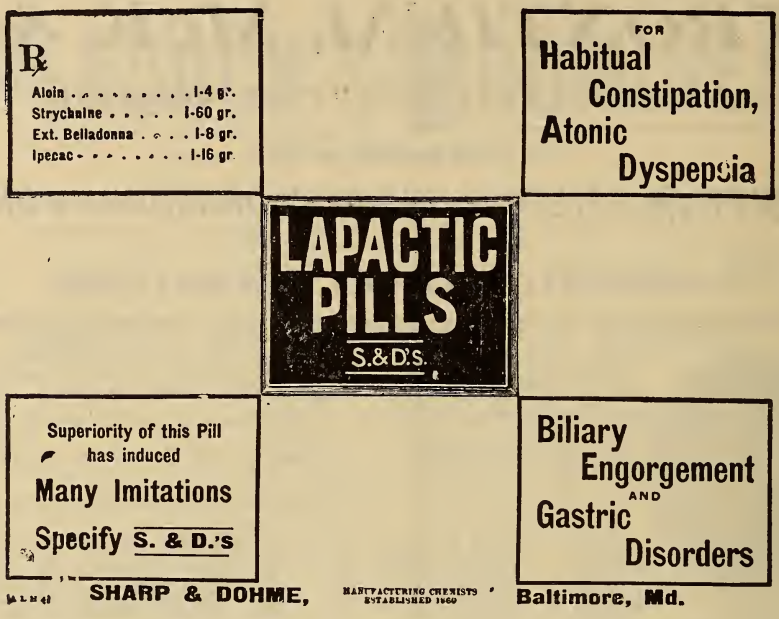
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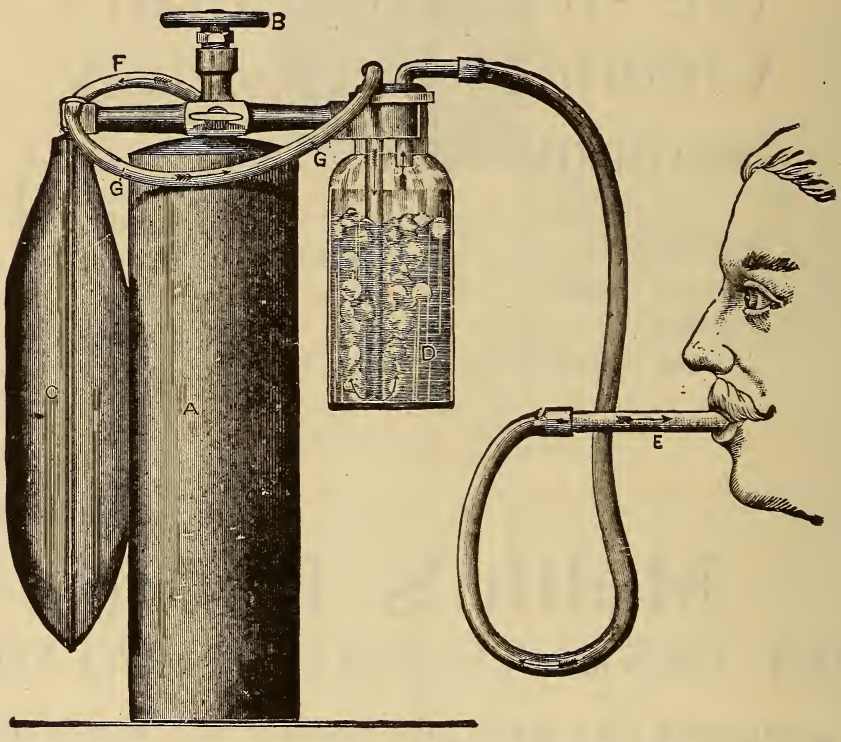

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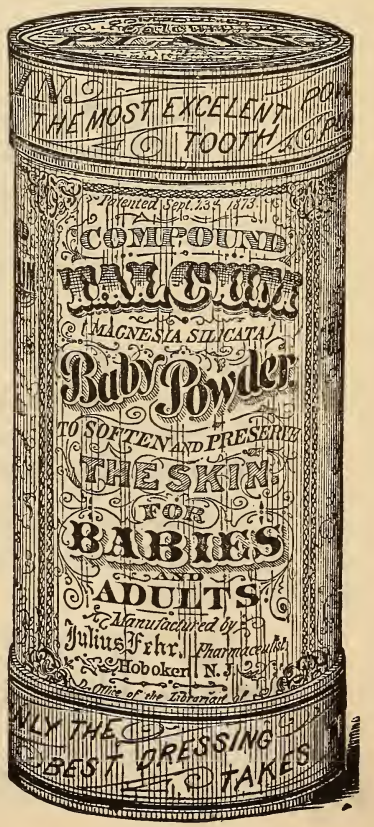

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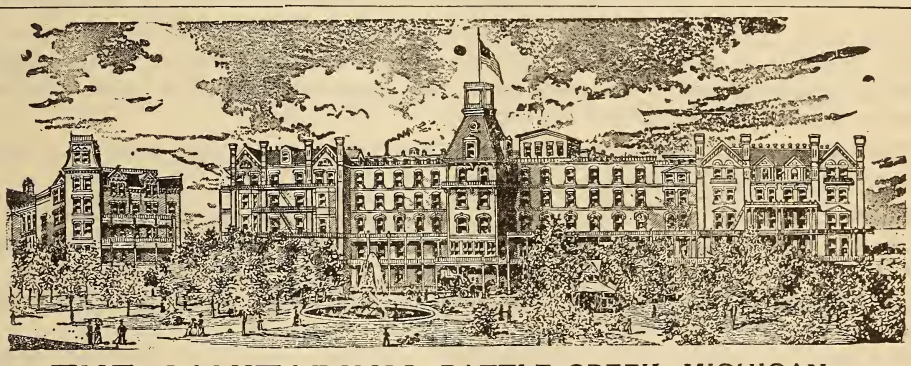

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Some time after this report, July 28th, MM. G. SEE and CONSTANTIN PAUL stated before the *Academie de Medecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively, and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

October 28th, M. DUJARDIN-BEAUMETZ, before the *Societe de Therapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

November 11th, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society, and stated that they had still further used the lactate and bromide salts, and found them perfectly tolerated even in high doses.

M. FERE found the bromide of strontium of efficacy in in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

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Care should be taken in prescribing diuretin, as it is liable to be decomposed by certain substances. M. Demme recommends the following:

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Brandy	gtt. x
Sugar	grs. xl

M. Sig. To be taken in the course of the twenty-four hours in doses of one tablespoonful.

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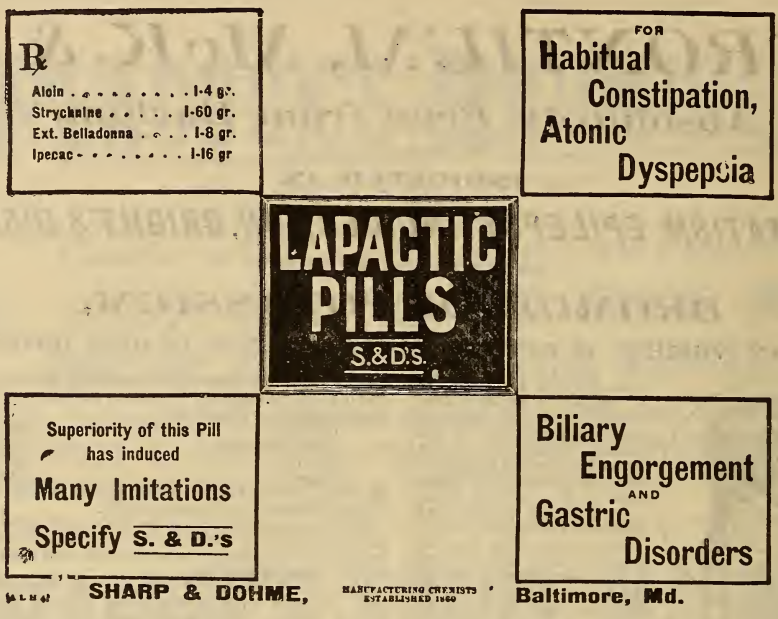
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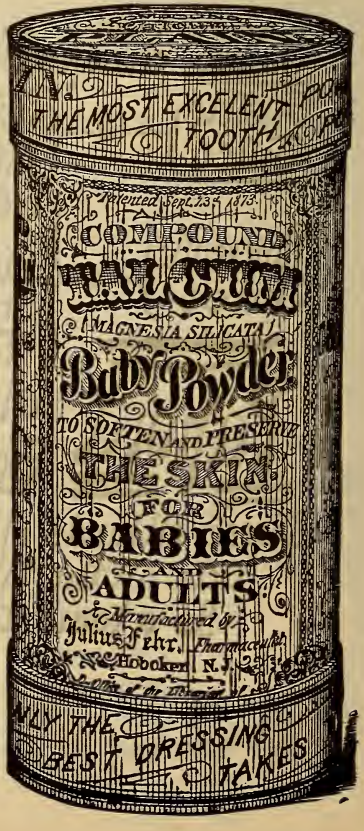

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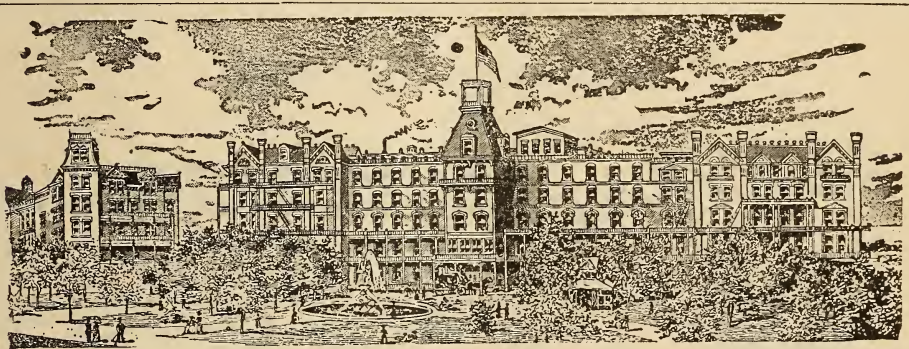

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE,

A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentat on of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoritiforme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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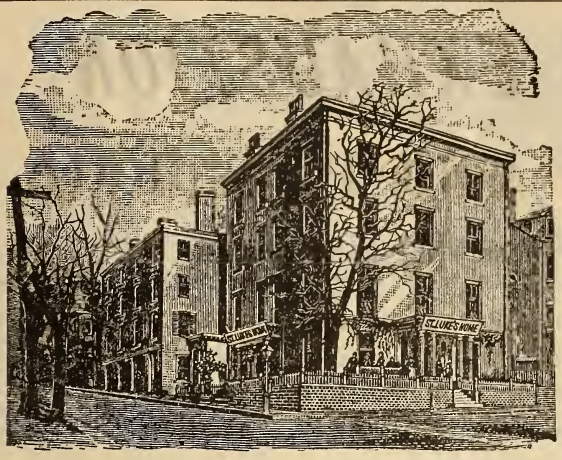

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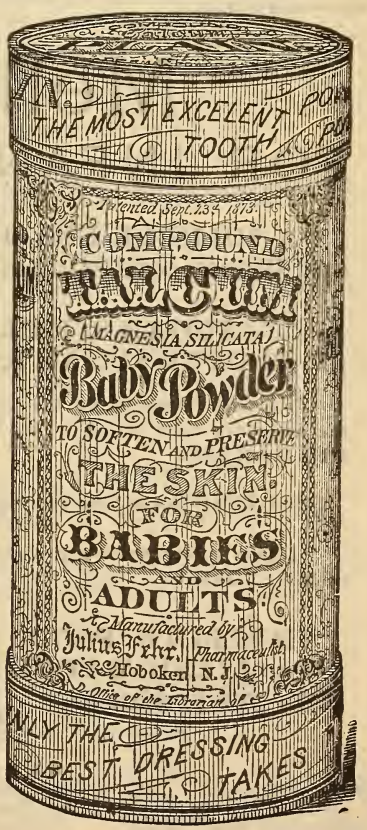

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Last July, M. LABORDE reported to *Societe de Biologie*, July 4, 1891, that he had found, contrary to the general opinion, that the salts of strontium might be safely employed, were beneficial to the animal economy, and that weight was increased under their use.

Some time after this report, July 28th, MM. G. SEE and CONSTANTIN PAUL stated before the *Academie de Medecine* that they had employed the bromide and lactate of strontium in rheumatism and Bright's disease, respectively, and could confirm the results of M. LABORDE in regard to the innocuousness and beneficial effects of the drug.

October 28th, M. DUJARDIN-BEAUMETZ, before the *Societe de Therapeutique* stated that he had obtained very good results in Bright's disease by the use of the lactate of strontium; that its action on the digestive functions was very favorable.

November 11th, MM. CONSTANTIN PAUL and DUJARDIN-BEAUMETZ made a further communication to the same society, and stated that they had still further used the lactate and bromide salts, and found them perfectly tolerated even in high doses.

M. FERE found the bromide of strontium of efficacy in in the treatment of epilepsy in the place of the potassium salt. He also found by numerous experiments that the toxicity of bromide of strontium, when given by intravenous injection, was far below that of the bromide of potassium.

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ACCORDING to the observations of Dr. R Demme, Professor of Pædiatrics to the Faculty of Medicine of Berne, diuretin may be administered in the daily dose of ·50 to 1.50 grammes (7½ to 22 grains) to children of from two to five years old, and in daily doses of 22 to 45 grains in children of six to ten years. In infants less than a year old the drug is contra-indicated, as it easily provokes gastro-intestinal irritation in these young patients.

Care should be taken in prescribing diuretin, as it is liable to be decomposed by certain substances. M. Demme recommends the following:

Diuretin	gr. xxij
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Brandy	gtt. x
Sugar	grs. xl

M. Sig. To be taken in the course of the twenty-four hours in doses of one tablespoonful.

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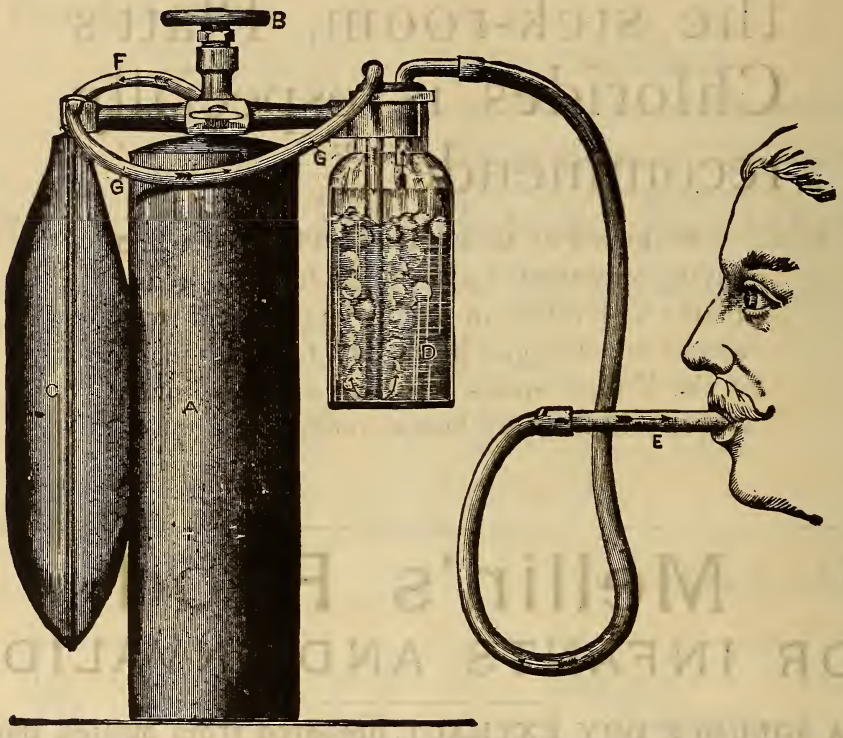

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BY HERMANN GOLDENBERG, M. D.

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My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chrysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

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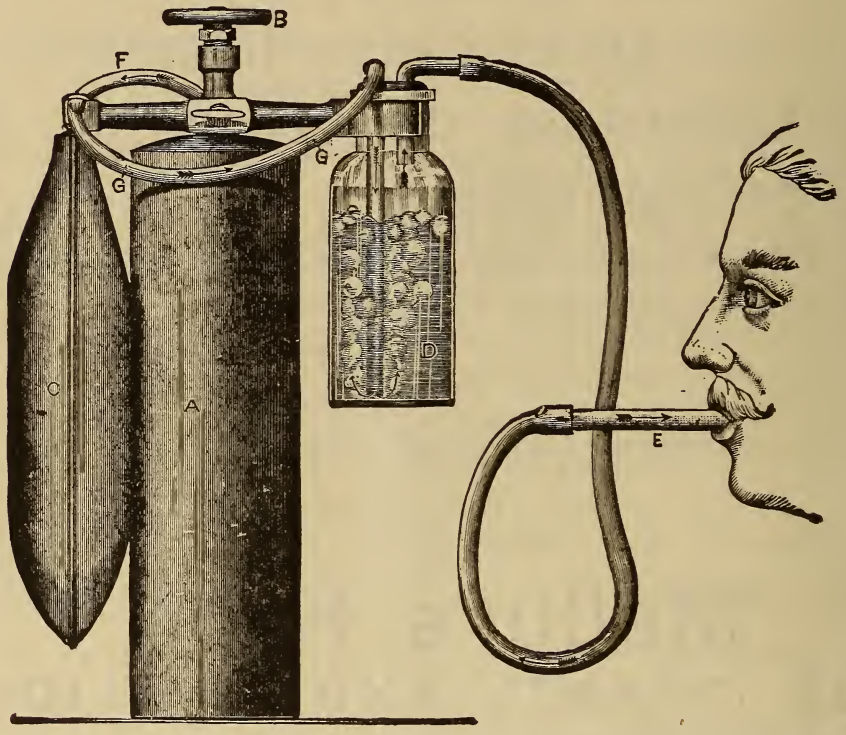

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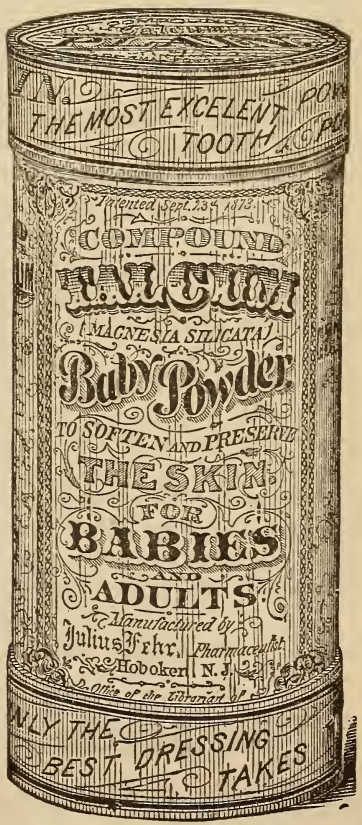

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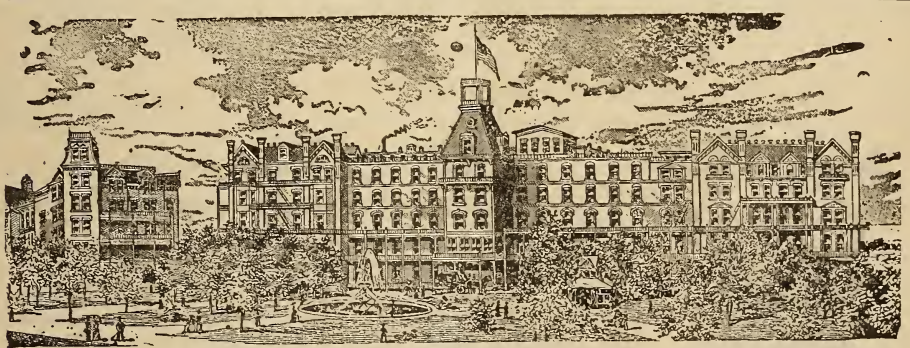

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In Previous Notes we have characterized, as follows, the requisites of a well-made pill:

PURITY of medicaments and excipients.
PRECISION as to weight and division.
PERFECT UNIFORMITY as to activity and identity.
PROMPT SOLUBILITY of mass and coating.
PERMANENCE as to conservation.
PALATABILITY; and ELEGANCE of appearance.

Perfect Uniformity as to activity and identity is largely dependent upon the two points in the above list—purity and precision—which immediately precede our present theme, and to them we have referred in other notices. Purity aids in securing uniformity as to activity, for unsound materials are subject to progressive chemical changes which give rise to wide variations in strength. Uniformity as to weight is to be obtained only by using the greatest care in mixing and dividing the pill mass. Stability is so important a factor, not only in securing uniformity, but for still more obvious reasons, that we will refer to it in a future note.

Meanwhile we ask attention to the following preparations, which, with many others in our list, will be found to realize the conditions we have described. Among the pills here cited are some useful preparations for this season:

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Pil. Arsenici Sulphidi, "W. H. S. & Co."

Prescribed in the Dermatoses. It has been successfully used in Eczema, Acne, Furunculus, etc., is highly beneficial in Psoriasis. (Pills of 1-100 gr., 1-50 gr. and 1-30 gr.)

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This circumstance will lead to confusion as to the real source of a given salicylic acid and we regret to have to admit that there are probably some dealers who will resort to the subterfuge of supplying "acid from the oil," when they know that the oil was not the natural product. So where such acid is desired, the pharmacist must demand of his dealer a guarantee extending to the oil itself.

Editorial Druggist's Circular,
May, 1892.

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE,

A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chrysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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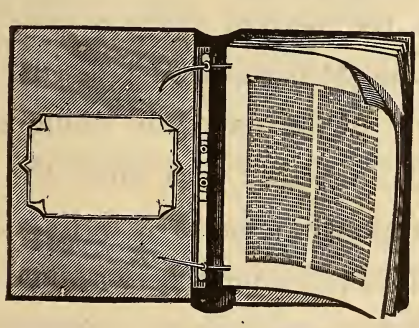

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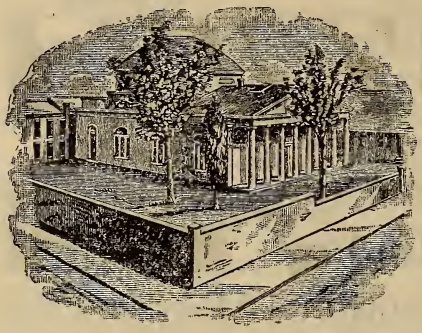

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Even with the best of germicidal treatments, then, in pulmonary phthisis, the reconstructive measures will still be needed to aid in the process of repair. In fact, without them the patient would be left peculiarly pre-disposed to immediate re-infection with the disease. It is, then, safe to predict that no method of treating pulmonary consumption will ever be devised, however radical in its nature, which will supersede the well-known hygienic and reconstructive measures.

The reason for this is plain to every thinking man. Even before the patient was infected at all, before any anatomical lesion existed in the tissues, at an unguarded time of lowered vitality, the germs of disease made a successful lodgment, and the destructive process commenced.

Now, it is a well established fact that the chief of all reconstructive remedies is the combined hypophosphites of lime and soda—*And this very remedy has long been in successful use in the treatment of consumption.* It is of equal value as a prophylactic in those cases that are constitutionally predisposed to the disease, and as a curative agent in the incipient and even somewhat advanced stag[illegible]. It alone has proven to be more [illegible] curing pulmonary tubercul[illegible] Koch method, and without [illegible] dangers and complications. It accomplishes its work gradually and insensibly, replacing new tissues, cell by cell, for the broken-down, diseased tissues as they are removed in a true physiological process by the absorbent powers of the system. In this there is no sudden "reaction" or violent process, removing large and dangerous sloughs, leaving the patient prostrated by the shock, and the adjacent healthy tissues raw and exposed, liable to receive the disease germs anew, and to disseminate them throughout the system more rapidly than before.

So, then, whether any of the germicidal treatments be ultimately successful in removing the cause of the disease or not, the hypophosphites of lime and soda will be a necessity in the armamentarium against consumption. As a specific curative agent, it will outlive them all.

But it is of the utmost importance that you assure yourself of the chemical purity of the preparation of the Hypophosphites which you use, as it is peculiarly liable to deterioration unless properly prepared. The McArthur Hypophosphite Co., Boston, Mass., will send [illegible] aluable information upon the treatment of consumption, if you so request.

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